No. 55.

Field Book

of

Willis Linn Jepson

1935

If lost, finder please return to me at the Herbarium of the Royal Botanic Gardens, Kew. Surrey, England & receive reward.

Avawatz Mts., nr. Mohave Mts.
Apr. 29, 1935. 3500 ft.

No. 17,325. Yucca brevifolia Engelm. Cave Spr.
No. 17,325a. Stanleya pinnata

Margin of wash near Cave Spr.

— I travel with Dr. C. B. Wolf (see vol. 54, p. 181, ante) as far as this point, Cave Springs, a highly interesting spot in a cañon, looking toward Amargosa Valley. Reluctantly, at this point I turn back: follow the road, starting about 4 o'clock, through the Avawatz Mts., then down into a valley, then up into and over the Granite Mts., then down into a broad valley dominated by Tiefort Mt., then over what I call the "Low Pass Mts.", having no name for them; (Cont. p. 13)

Barstow to Mohave

No. 17,326. Oenothera

Barstow, 2200 ft.

No. 17,327. Oenothera
Barstow

No. 17.327a. Oenothera Barstow. 2200 ft.

No. 17,328. Gilia latiflora Gray.
= G. davyi Milt. Kramer, 10 mi. w. of, a dominant on the level plain, the desert blue with it for miles.

No. 17,329. Malacothrix glabrata
Kramer, 10 mi. w. of.
a dominant. Ligules of the heads pale yellow.

No. 17,330. Oenothera
Kramer, 10 mi. w.,
a dominant.

(Discarded, insect damaged)
No. 17.331. Coreopsis
A dominant; 10 mi. w. of Kramer.

= Caulanthus
No. 17,332. Streptanthus inflatus Wats.
Kramer, 10 mi. w.

On the mesa this species occurred in such number of individuals as to give distinctive aspect to localized areas. The stems, mostly much inflated, strictly erect and usually unbranched, impart an exotic air in miniature, as of some strange tropical vegetation.

— After having returned to Barstow from the Avawatz Mts. (see p. 1) I go to Waterman Ranch (just over the Mohave "River" from Barstow), pack up the plants which I have left there, bid my friends goodbye. Miss A. L. Waterman and J. H. Manson, stand by the adobe, and as my auto runs down the curve of the road, wave good-bye. I must catch my steamer at New York,

Cameron, Kern Co., Apr. 30, '35

No. 17,333. Forestiera neomexicana Gray Cameron, below Tehachapi Pass, on the desert side.

No. 17,334. Astragalus Douglasii T. & G. Cameron sta., Tehachapi Pass, desert side.

— Yucca brevifolia, about Kraemer and for 12 miles west, stretching south into the Kraemer Hills, southwest for about 8 miles into a rather dense forest, dense in the sense that in places the trees almost close the horizon. None about or west of North Muroc on the vast desert flats reaching towards Mohave (? about 8 miles from). Then a 4-mile-zone (north and south), thence curving around to the north base of Soledad Mt. near (south of) Mohave. On the west (of Mohave sta.) a broad forest extending over the mesas to the Tehachapi Mts. and on west, perhaps (base of the) to the cluster between Fairmont and Neenach

Tehachapi Mts., Apr. 30, 1935 Kern Co.

No. 17,334a. Linanthus dichotomus Bth. Tehachapi Pass, n. side 1½ miles. 4000 ft.

No. 17,335. Poa scabrella (Thurb.) Benth. ex Vasey (det. Beecher Crampton, 7/76) This grass grew with the preceding.

No. 17,336. Festuca confusa Piper (det. Beecher Crampton, 7/76) This grass grew in the open oak woods near Keene.

No. 17,337. Trifolium variegatum var. variegatum With no. 17,336

No. 17,338. Orthocarpus attenuatus Gray. With no. 17,337

No. 17,339. Layia heterotricha (DC.) H. & A. Two miles w. of Caliente, in fields by main highway, Tehachapi to Bakersfield.

— The Tehachapis are wonderfully full of color. Orthocarpus purpurascens in mass makes deep color spots on the slopes with blue of Lupine. It is the flush of the spring time here — the fresh green of the oaks, (Cont. p. 7)

Caliente, 2 miles west of, (on main highway, near the road fork to Caliente).

No. 17,340. Delphinium Hansenii Greene

Steep hillslopes.

No. 17,341. Hemizonia pallida Keck

An abrupt hillside

By the highway is covered with this, forming a dense pure stand. The whole hill is thus given a peculiar effect, the plants being so uniform and so tall.

No. 17,342. Isomeris arborea Nutt.

Steep hill slope.

- Cont. from bottom p. 5, the verdant hills, the seamed and gullied slopes of the high mountains northward - all makes an ever-beguiling picture.

— From the wonderfully lush hill vegetation near Caliente (west of) I run on into Bakersfield a bit after dusk and put up at the Hotel , well I forget it, — it had special garage arrangements by which one paid 25 c. for the car. See p. 205.

· Driving into Bakersfield from Tehachapi, somewhere in the valley, along the railroad, I got a mote in my eye. It was quite annoying and I could not get rid of it. Then I thought of a childhood device and tried it and it worked! You pull the upper lid down hard and blow out of the adjoining nasal passage hard!!

Lerdo, Bakersfield plain nw. Kern Co. of Bakersfield 9 miles.

No. 17,343. Linanthus pharnaceoides (Benth.) Greene. Sandy plain, very abundant; one of the dominants. = L. liniflorus Bth. var. vallicola Jepson.

No. 17,344. Hollisteria lanata Inconspicuous on the grassy plain but common. Sandy plain.

No. 17,345. Hemizonia Kelloggii Greene. Sandy plain.

No. 17,346. Loeflingia squarrosa Nutt. This caryophyllaceous plant grew on the dry sand plain.

No. 17,347. Chorizanthe

415 ft. May 1, 1935.

This morning, before starting from Bakersfield north, I drove to the eastern residential district of Bakersfield and had a few pleasant moments with one of my correspondents, Mrs. Allison Kramer, who lives in a neat cottage, no. 1723 Pacific st. I showed her my field press and in what manner it was used in collecting. She has favored me with much valuable material from the Kern County region.

— My trip homeward from the Mohave Desert through the San Joaquin plain to Berkeley is described in a letter to Miss A. L. Waterman, Barstow, whose hospitable ranch sheltered me. The letter is in Jepson Correspondence, dated May 2, 1935. Copy of the

Madera, Madera Co, May 1, 1935.

No. 17,348. Trifolium gracilentum T. & G.

No. 17,349. Poa scabrella (Thurb.) Benth. ex Vasey (det. Beecher Crampton, 7/36)

This grass is abundant and from the nature of its local abundance, I take it that it was once distributed widely over the San Joaquin plain.

No. 17,350.

This plant of the Filagineae is not common.

No. 17,351. Lupinus

Platanus racemosa. General David P. Barrows has described to me a remarkable grove in the Arroyo Grande country which he regards as the finest representation in Cal. cf. also ante 6:160. also indices to Field Books. Note particularly: it does not enter the North Coast Range country anywhere; that is not in Napa Valley, Ukiah Valley, etc. Not around Clear Lake? How about stream beds in foothills on west side Sacramento Valley? Not in Vaca Valley. Occurs at east base Baldy Peak, Berkeley Hills. Nearest station to sea gap of Golden Gate? Or is it at San Leandro? See Field Books. Note the large leaves in collections — 18½ in. broad!! Associated with Redwood at the

Little Sur River (F. B. 16:127) by the sea, probably within a mile! Associated with Washingtonia filifera in canons on west edge Colorado Desert in S. Cal!! (east base Mt. San Jacinto, 37:164). Reaches edge Pinus ponderosa belt (5:158). Carmel River, 1:57. Gilroy 1:74. Tehachapi, 25:69. Rowen, 2300 ft., 32:157. San Pasquale grade, 37:26. San Jose del Valle, 37:35. Hot Springs Mt., ascends to 4000 ft., 37:134. Sierra foothills (but not on plains), 17:63. Indian Canon, Collins Valley, 37:175. Not seen on west side San Joaquin Valley, 17:34, 43. cf. also 24:71, 98, 104, 105. There are also economic notes in F. B. not cited above.

— Mar. 17, 1937.

— Cont. from bottom p. 1. then through an immense "Lake valley", then up the long even slope of the Calico Mts. and through them; down into the Calico Wash valley, up to "First Summit", thence down to Barstow, where I stop in an "auto camp" cabin overnight (the night of Apr. 29).

No. 17,352 to 17,364 not used.

— St. Helena Sanitarium. In May, 1935, as a rest before going to Europe I was at St. Helena for one week.

— Rancho Cantua, note on. See "Men & Manners" note book, vol. 9, p. 59.

Berkeley to Philadelphia

Left Berkeley Friday, June 7, at 7:30. My man of business, N. B. Coghill, drove me to the Southern Pacific Mole where I boarded the Overland Limited. The next day was in Nevada, the highest desert ranges appearing to be well-covered with snow. The next day fine range of the Colorado Rocky Mts. It showed heavily draped with snow. The trees in towns and about farm houses in Wyoming and western Nebraska appeared to be mainly a Populus — but in eastern Nebraska many other trees came in — but excepting along water courses appearing to be the results of culture. Through northern Ohio the farms appeared small and on only one

place did I notice a tractor — elsewhere small teams of 2 or 3 horses being used for a plow or cultivator. Arrived in Philadelphia. Put up at the Robert Morris Hotel near the Broad St. Station. Very very comfortable for $ 2.50 per day. Walked a few blocks to look at Independence Hall and the hall near it in which the Congress of the United States first sat.

Arrived here (Philadelphia) at 6 a.m., June 11, Tuesday. Went early to the Philadelphia Academy of Natural Sciences where I met Dr. E. W. Pennell, Curator of the Herbarium. He gave me a most pleasant welcome. He has chosen Scrophulariaceae for his field and is working

on the group in the field as well as in the herbarium. I came here to look at Uvitalli plants but there appear to be few of them so far as my slight examination showed. There was a fair specimen of Leanothus thirsiflus, none of L. oliganthus, a single leaf of L. divaricatus (cf. Types and Orig. Citations Notebook, vol. 2, p. 15).

The building of the Academy is a fine and rather large structure. The library of the institution is old, large, well-stocked. Its lobby is a large room, rather imposing with its high walls hung with oil portraits of its distinguished members.

The herbarium, while old, seemed to me rather small, and certainly has very limited

space. It contains the Lewis and Clark collection of plants which is kept separate. There are other old collections which are of great interest to Eastern botanists. There are many plants of Elias Durand but Durand's herbarium was given to the museum at Paris.

I met Dr. Edgar T. Wherry who took me over the University of Pennsylvania campus. It is near the heart of the city but across the Schuylkill River. It is much crowded and did not seem at all impressive, though it has many substantial buildings. Dr. Wherry, though an ecologist, is going in for Polemoniaceae as a systematic study. He said: "I have found the account of them in your floras extremely satisfactory." Such a remark shows how little he knows about west-American Polemoniaceae. My treatments are not at all satisfactory to me.

New York

Arrived in New York at 10:00 o'clock from Philadelphia. Put up at the Herald Square Hotel. In the afternoon went out to the New York Botanical Garden. Had the usual trouble with the Tube and subway trains. I explained to many trainmen and attendants in stations that I wanted to get to the westerly side of Bronx Park and not the easterly at the Zoological Gardens. But it did not avail. Every man I talked to was a "foreigner". So with difficulty I got to the other side even. (See 8th Ave. Subway, p. 28).

At the Administration and Museum building I left my card for Director E. D. Merrill, who was not in. Went

upstairs to Dr. J. K. Small's work place, where I found him seated and busy as usual. I greeted him. He looked up and said: What is your name? I have known him for forty years, a little more, and also corresponded with him. I told him that my name was Jepson. He was a bit frustrated and tried to pass it off by saying that I looked so young. Here he made a mistake: he should have said that I had aged out of recognition. He was busied with drawings of ferns for a book on Southwest Ferns; also a set for a book on the ferns of the New York region. He said: "Maxon (W. R.) and Weatherby (C. A.) won't do this work. They won't

go ahead and finish up anything – and yet now that I have done it, or when I have done it, they will criticize it adversely in a very strong manner".

I left Small and went to find Dr. J.H. Barnhart. He recognized me instantly and we fell to talk, – about the difficulty of securing essential biographical facts from botanists and collectors as to their activities. When I had an opportunity, I asked him what had happened to Dr. N. L. Britton, the late Director at the New York Botanical Garden, since Britton's death, metaphorically speaking. Barnhart answered me very frankly as follows:

1. Long before Dr. Britton resigned

, that is some years before (when he was getting along in years) the Trustees were dissatisfied with his management of the Garden and desired his resignation. It was not asked for – but would have been had he not voluntarily resigned.

2. During the whole period of the Britton administration, Britton's policies prevailed. Anything that he recommended was rubber-stamped by the trustees.

3. His policy was one of demanding that pieces of botanical work be done, finished and printed – done as well as could be, but at all hazards finished. He wanted quantity rather than quality. The amount of work which he published himself, of

this own work, was prodigious, but it was not especially careful, not scholarly.

4. His Manual was printed by Henry Holt and Co. and they refused to make final corrections in it – after it was in type. So it contains hundreds of errors – and many typographical ones.

5. The drawings in his Illustrated Flora are very unequal, being done by different artists, and many are very poor. The details are not explained, and to this day many such are not known as to what they are, what organs are represented. Also the scale is not always given or understandably. (See also p. 109 seq.)

All this was in explanation

of my comment on the citation of Gray's Manual in Dr. H. A. Gleason's little book (new local N. Y. flora) with no mention of Britton's Manual. Barnhart said in further explanation that Gray's Manual is the book most commonly used about New York City (not Britton's Manual). Second, there has been no new edition of Britton's Manual in nearly since the first edition. Gray's Manual, moreover, conforms to International Rules and Britton's Manual to the American Code. Barnhart also referred to Britton's autocratic ways. See p. 47 seqs.

As I stood talking to Barnhart, through all this matter, E. D. Merrill came along. Talk soon developed with Barnhart, which

I did not understand at all well — but after Merrill went on down the corridor, Bornhart explained that Merrill has been offered a new position at Harvard, one which will co-ordinate all the varied botanical groups of Harvard under one head: the Department of Botany, the Gray Herbarium, the Arnold Arboretum, the Botanic Garden and so on. Merrill is now considering this offer. Doubtless he will take it, partly because of the prestige of Harvard, partly because he is dissatisfied with the somewhat situation at the New York Botanical Garden as he found it. One trouble at Harvard is that no department or group is

allowed to go out and solicit support, though needing it financially badly. Even though sure of getting it. The reason being that the Corporation may have decided to make a drive for funds for Physics say, and will not permit anything else to interfere.

Dr. Britton gave a quarter of his estate to the New York Botanical Garden. The Garden possesses the letters written by J.C. Fremont to John Torrey.

The name of Asa Gray came up. I pointed out that Gray had no interest in field work and though he came to California three times he did not come to botanize and was rather bored by persons who wished to take him into the field. Besides he did

not know our native plants in the field, that is living, and joc[k]osely turned away his questioners with the suggestion that if they would dry the specimen, he would tell them the species. Here, Barnhart interposed and said that merely meant that he wished to make comparisons in the herbarium. This remark of Barnhart shows how far the New York Botanical Garden has gone over to the Gray Herbarium these days.

Now that there has been an opportunity for reflection, I note: B. L. Robinson resigned or made his contemplated retirement known several months ago. I am certain, as I well can be under the circumstances, that

Merrill immediately went to Harvard and stimulated the movement, if he did not actually initiate it, which ~~set going~~ the proposal that he be brought there as head of all Botany!!!

Barnhart discussed the difficulties raised at Harvard for Merrill that might be. One was Fernald (M. L., Fisher Professor of Natural History) who would be expected to criticize; but, said Barnhart (as if it were a great joke), all that is necessary is to ask Fernald's advice beforehand and then go ahead and do as you like. He will be satisfied if he is just consulted! Barnhart snickered immoderately. I said: Well it is very hard to spend your life building up a department, give

New York, June 15, 1935.

all that you have to it – and then not even be consulted! Barnhart moderated his tone and agreed.

My mode of getting out to the New York Botanical Garden was to go two blocks west from my hotel on 34th st to the Eighth Avenue Subway – a new municipal underground line. Change at 125th st and take the train marked CC – Grand Concourse – Bedford Park. This takes you to Bedford Park Boulevard station where you are within five blocks or so of the Museum Building.

Today, June 15, I go, in the morning to my steamer, Red Star Liner Georgic, bound for Queenstown, Southampton and London. The dock is crowded with passengers.

River Thames, England,
June 24, 1935.

We put into Queenstown (Cobh) day before yesterday. It looks like a fine land-locked harbor, but mariners say it is very treacherous. Thence to Southampton, then to Havre, a splendid port as made by man with very fine derricks, landing gangways operated by machinery and so on, – finer and more extensive than I have seen elsewhere. Thence across the English Channel and into the Thames mouth last night. This morning we are in the calm of the river opposite Greenwich. After getting through Customs, at London,* where one is treated very courteously, we proceed from the Royal Albert Dock by slow train to Liverpool street, where I get a train of the London District Railway ("Underground") ↑Metropolitan

* 6th time I land in England

Kew, June 26, 1935.

There trains are frequent and rapid, and soon I am in Kew. It is always difficult to find suitable lodgings in Kew, and this time I go into a private hotel, Cumberland Hotel, Kew road, near Cumberland Gate, Kew Gardens. The food is very very poor for me, and I am to move in a few days to 15 Clarence Road, Sandycombe Road, Kew,

A most cordial welcome awaited me at the Herbarium when I went to the Botanic Gardens the next morning, June 25. The next day, for dinner, I was invited to the Spragues at Kingston where a very agreeable evening was spent. Miss M. L. Green was there also, and took me back to Kew in her car afterwards.

Kew. June 29, 1935.

Today, in mid-afternoon, Dr. Sprague came around to my place, and asked if I wished to join him on a trip to the Victoria and Albert Museum in South Kensington. So we went. On the way he said: "I had to do Loranthaceae for Oliver's Flora of Tropical West Africa. A. Engler had published a lot of Loranthus species which were no good as a whole, as I found when I went to Berlin to study them. I was in a quandary as to what to do, because I knew Engler would not like to have them reduced. What would you have done?" I said: "I should have reduced them. Species when once published are the property of the botanical public, or perhaps better botanical science." Sprague: "Ah, but that would not have done, to come away and then explode a bombshell after you

are back. We have, in our official positions to keep on good terms with European botanists. So I did this: I wrote to Dr. Stapf at Kew, asking him what I should do? Stapf replied, saying: Select your two most convincing cases, those in which there is no possibility of doubt, and put them before Engler and ask his opinion. He will appreciate being consulted; and it will prepare his mind for what you are doing. So, I took two species to Engler: they belonged in his arrangement to different sections. I not only regarded them as related but identical. Through some slip or through something overlooked, Engler had them put them in different sections. I pointed out to Engler that

there did not appear to be difference and showed the specimens in such way that there was no possibility of dispute. Engler listened and agreed. Then I showed him the second case, which was a case of an abnormal development due to the presence of galls. Engler would not, however, agree to this.

Engler is very jealous of his species. And it is true that if you publish an invalid species, it is a reflection upon you."

I said: "The matter seems to me exaggerated. Every botanist, the very best, have published many bad species. Where the work is done by a capable trained man conscientiously, there is no discredit in a poor species. It is lack of knowledge, lack of material, which brings this about. The discredit

is in not being willing to reverse yourself and put the name into synonymy. Indeed in many such cases, where the work is done by a truly scientific Botanist, such instances represent real additions to knowledge. The previous description did not contain enough of real facts as to the life-history to permit a proper determination of relationships. As for myself I do my work on species in a purely impersonal atmosphere. I am not thinking of the man who published the species being studied as a person. The abbreviation H.B.K. to me represents merely an identifying symbol."

Sprague: "But there are few who work in so impersonal a way as you do."

— There are as usual many persons here from all over the earth. One is from Vivi Tackholm* who is working on a flora of Egypt. It seems that this was the project of her husband who died and left her to complete the task. She is a most energetic person, with an amazingly abounding vitality. She is also wonderfully cheerful and friendly — and always has a ready good-natured smile.

When a girl she went to the United States "slumming" — and worked her way from New York to San Francisco and return, employed in all sorts of positions, often as a domestic, in order to make a study of sociological conditions. Knowing several languages, her employer did not realize how much she understood and she once heard it said over the telephone, as a

* Full name = Vivi Laurent-Tackholm.

telephone conversation, that she was the worst cook that they had ever employed. I understand that her book has been translated into several European languages.

— went to call at 3 Cumberland Road, (Kew) on my old-time friend E. J. Baker. He had as an afternoon tea guest, Fraulein Bircker, a young woman of marked culture and refinement, the daughter of Alfred Bircker, The Middle Egypt Botanic Garden, El Saff, Upper Egypt, about 40 mi. south of Cairo. His garden, 200 acres, is a horticultural garden for fruits — introductions of all kinds. On account of the summer heat at El Saff, the Birckers have a home at the Italian Lakes, on Lake Lugano. Fraulein Bircker is helping her father with his descriptive (horticultural) account of his garden, which is

being made ready for publication. She herself makes no claim, disclaims being a botanist; says she is a geologist. The Birckners are Swiss, — I think German Swiss. — Sunday, July 7.

— Dr. T. A. Sprague says: Ceanothus hybridizes so freely in cultivation that it is very difficult to keep any proper line on the strains specifically. We went on a walk along the * canal at Brentford. This is a very old canal and it seemed to answer to that described by Charles Dickens in "Our Mutual Friend". Sprague called attention to the large veiny stipules of Trifolium praelense which he considers diagnostic. Along the hard tow-path is Matricaria suaveolens which has been introduced into England in the last ?10 years and has now spread widely. We

* Grand Union Canal.

also went on a walk in Kew Gardens. He called attention to the lateral 4-merous flowers of Ruta graveolens, and the terminal 5-merous flower. Lychnis coronaria was blooming and he commented on its specific name — it was used anciently for garlands. He also commented on some plant, having two different types of flowers, which those who railed against Linnaeus' "sexual system" used in hopes to confound, him, namely two different classes on one plant! This may have been Ruta. No! It was

Anthoxanthum odoratum

One enters the iron gates at the Herbarium Building, rings the bell, and is shown into the reception room if he is a visitor for the first time.

Portraits in reception room, chiefly the directors in past times of Kew, or superintendents, keepers of the Herbarium, curators of the museum, curators of the gardens:

William Jackson Hooker,
Joseph Dalton Hooker
W. Thiselton-Dyer
David Prain

Thomas Thomson, Supt. Royal Botanic Gardens, Calcutta.
Theodore Cooke, Flora of Bombay
Daniel Oliver
John Gilbert Baker
W. Botting-Hemsley
Otto Stapf

William Aiton and his wife, Hortus Kewensis.

A table showing list of floras of various countries of the

— Cont. p. 41. —

Kew, Surrey,

— An assistant in the Herbarium tells J. T. Howell, Cal. Acad. Sci., San Francisco, who is here, that C. Epling inveigled the authorities at Kew into giving him scraps of the types of various Labiatae - especially South American Labiatae. — Well, there was, I imagine, just one person concerned, Dr. T. A. Sprague, Deputy Keeper of the Herbarium.

— An assistant in the Herbarium says the reason Sir Joseph Hooker made no keys in his flora was his conviction that it led to superficiality!

Continued from bottom of p. 76.

She also referred to the Jepson of Lincoln Cathedral who has some fame. He was one of the four Prebends of the Cathedral: "Drunken Heth, Gambling Nelson, Fighting Kent and Mumbling Jepson".

There is a memorial tablet in the cloisters of Lincoln with Jepson on it. I was shown a picture of it.

- Cont. from p. 39 -

British Empire, prepared wholly or partly at Kew.

Photograph of the Kew Staff, Dec. 16, 1905, an interesting assemblage of 30 men - all of them well-known or famous names in Botany.

A cabinet containing hundreds (or rather thousands) of portraits of botanists classified alphabetically.

In hall-way:

Augustin Pyramus de Candolle
Alexander von Humboldt
Robert Brown
Alphonse de Candolle
Lamarck

Also Daniel Hanbury, William Roxburgh, C. B. Clarke; and a few others.

London, June 30, 1935.

After visiting Dr. Johnson's house (see p. 43) I went to the Tate Gallery. I have not seen it in just thirty years — but it is full of pictures which through cheap reprints are well-known and long popular. There is a very striking picture — a large canvas — of a concleave of cardinals. For some reason, perhaps illness, Pope Alexander VI is not present and his daughter, the voluptuous Lucrezia Borgia has willfully entered the chamber and seated herself in the papal chair. The expressions on the faces of the differing cardinals, the old and saintly, the younger and more carnal, give the assemblage its greatest interest. A type of picture the English love well is a park scene with trees and horses showing the Third Earl of Litchfield standing by his horse and his wife Diana Frankland mounted. They are respectively third in descent from Charles I and Oliver Cromwell. [The Cromwells intermarried with the Frankland sons.]

London, June 30, 1935

Today, Sunday, I went into London to revisit old scenes. At Dr. Johnson's house in Gough Square, I make note of some of the Memorabilia:

Caddy, cup and saucer, made in China c. 1775 for Sir Joshua Reynolds and enamelled with his cypher

Mrs. Thrale's tea equipage.

Dr. Johnson's surgeon Forgo.

Boswell's coffee-cup and mug made in China and enamelled with his crest.

Picture of Dr. Johnson doing penance in the market place of Uttoxeter.

Picture of Dr. Johnson rescuing Goldsmith from his landlady (cf. my letter to Professor Martin Flaherty, copy in Jepson Corr., dated

London

I take down the following definitions from a copy of his dictionary:

— Favorite: One chosen as a companion by his superior; a mean wretch whose whole business is by any means to please.

— Lexicographer: A writer of dictionaries; a harmless drudge that busies himself in tracing the original and detailing the signification of words.

— Network: Anything reticulated or decussated at equal distances, with interstices between the intersections.

— Pension: An allowance made to any one without an equivalent. In England it is generally understood to mean pay given to a state hireling for treason to his country.

— Excise: A hateful tax levied upon commodities and adjudged not by the common judges of property, but by wretches hired by those to whom excise is paid.

— Chicken: A term for a young girl.

> Then Chloe still goes on to prate
> Of thirty-six and thirty-eight;
> Pursue your trade of scandal-picking,
> Your hints, that Stella is no chicken. —
> Swift.

— Pastern: The knee of a horse.

— Tea: A Chinese plant of which the infusion has been much drunk in Europe. Lately

— Transpire: To emit in vapor.

Transpire, v. n. 2. To escape from secrecy to notice; a sense lately innovated from France without necessity.

— Blister: A pustule formed by raising the cuticle from the cutis, and filled with ferrous Blood.

— Essay: 1. Attempt, endeavour.

2. A loose sally of the mind; an irregular indigested piece; not a regular and orderly composition. n.

To my great distress I find that the steel engraving which shows Dr. Johnson waiting in the anteroom of the Earl of Chesterfield has been removed from the walls. On inquiry, I am told that it is because of lack of artistic merit! See my letter to the London Daily Telegraph, Sept. 16, 1935.

— Alice Eastwood, Curator of the California Academy of Sciences, San Francisco, is here at Kew. She is a bit advanced in years, but looks well. However, the English food is rather too much for her and she has been made ill by it, living at the "Priory" near Kew Green, where the botanists from America usually go. Today I invited her and J.T. Howell, who is with her, to a midday dinner at the Star and Garter Hotel, across Kew Bridge, on the Middlesex shore of the Thames. I ordered vegetables chiefly — which are not served in any degree at the Priory. Miss Eastwood took a generous mouthful of the cabbage, looked at me, a twinkle came in her eyes, a smile spread over her face and she exclaimed joyously! "My, aren't those good!" I saved her life!!! and she has been so friendly!!

— John Thomas Howell, who is here at Kew, reminded me of an old incident. It seems that in attempting to explain certain matters to him when he was a student, I pointed out that in order to understand certain of my actions, he should remember that I was an idealist. Howell said he had never forgotten this conversation.

— Cont. from bottom p. 69. There is a "no smoking" regulation in the herbarium, but an exception is made for the laboratory. Merrill says Dr. N. L. Britton smoked wherever he happened to be, wherever he happened to be being "laboratory." If so this is an example of autocratic ways on the part of Britton (cf. p. 23 ante).

— Today, July 17, I was invited to luncheon by the Assistant Director, Mr. John Gilmour. He lives in Deacons House, not far from St. Anne's Church on Kew Green. I was received by Mr. Gilmour and his wife. Both are very young. In a few moments Dr. T.A. Sprague came in. We talked about the tea houses on Kew Road — the Orange ↑Kew Road,

Kew, Surrey

Tree at Kew Bridge where the botanists go at 4:30 o'clock; the little tea room opposite the postoffice on Kew Road where as I related Dr. W.W. Maxon delivered to me his great relation of the personal habits and niceties of E.L. Greene. We talked of nomenclature – especially Dr. Sprague talked on this subject. Finally Mr. Gilmour asked, about politics – a question economic questions in the United States and I delivered an opinion on the N.R.A. & the effect that it had hindered recovery. But all agreed that revolution was a danger unless something had been done.

– Continued from p. 90 seq.

It seems that Miss Green and Dr. Davy were well acquainted, having lived in Kew in the same boarding house for one winter. Miss Green feels strongly, therefore, that Davy should have written directly to her.

cf. also. p. 87 seq.

[When I hear these relations of quarrels in various parts of the earth, between botanists, I am so glad that I have never confided difficulties to anyone on my travels.]

– Took Dr. Sprague to tea this afternoon at the Orange Tree. He said that a "Botanist" * at Kew begins at £250 and after 10 years reaches £400; after 10 years more reaches £600 which is the limit. As Deputy Keeper his limit is now £700.

At the British Museum the scale is higher, reaching £900; but that place is exceptional, none other of the scientific insti–

* This is a distinct rank.

tutions getting as much. These salaries are taxed. The exemption runs to £200, I think he said, in case of a married man, and a little more exemption for two minor children. The tax (in "the lower brackets" as we would say) is 4s 6d in the pound. — July 18, 1935.

— Sprague tells me further that retirement for the Assistant Botanist rank at Kew and below is compulsory at 60 years of age, for the rank of Botanist and above 65, but optional at 60.

— "All books wherein errors cannot be corrected by the sense ever did and ever will contain some errors". — Amos Eaton, Manual, 8th ed. (1840).

Notes on Lilium, HB. Kew.

— Lilium columbianum Hanson. Leaves 3 to 6 inches long, 3/4 to 1 3/16 in. wide, tapering acutely and equably to each end, — thus elongated rhombic. Distinct whorls (4) above, the lower leaves scattered, small (1 to 2 in.), linear. The above notes are based on: Mt. Shasta (s. of), L. Kranitzky; Goose Valley, Shasta Co., Eastwood (no fls., no fr.); Butte Co., Mrs. J. Bidwell (Ex. Herb. A. Gray, 10/78), this 1 atom. has almost no leaves but a lunge panicle 2 ft. h. July, 1878 (label in Watson's hand!)

The lower leaves are not necessarily small, but ordinarily they are much scattered, the lower portion of the alternate-leaved half sometimes appearing quite naked.

There is preserved here in Kew HB. on a horticultural sheet of this sp. a small outline card of California showing a station for L. columbianum in each of the following counties: Madera, Mariposa, Eldorado, Nevada, Plumas. There is also a sheet from Pine

Ridge, Fresno Co., Hall & Chandler 221, distributed as this. It is a slender not vigorous spm. Characteristic whorled leaves lacking save for 2 smale opp. leaves above. The stem bears a single fl. Hanson is spelled "Hansen" on label.

I perceive now that the spm. from Goose Valley distributed by Alice Eastwood as L. columbianum is not that, since it has jointed scales on the bulb-rhizome. I perceive also that its leaves are yellowish-green (as preserved in herb.), whereas nearly all Columbianum has dark green leaves. This is particularly true of Kraetter's spm. (which, however, has no bulbs; most spms. have no bulbs). Hall & Chandler 221 has a "bulb", but the rootstock has shed its scales completely, bearing only its roots below. Therefore this is not columbianum

I think, because as I remember, L. columbianum does not shed its scales* from the rootstock of the bulb. All the spms. cited above are, probably, doubtful, since occurring in the Sierra Nevada. My statement in "Man." "upper leaves scattered, lower in whorls", is just the opposite on the basis of Washington and Oregon specimens.

* see p. 59 seq.

– cf. Purdy's notes (Jour. Roy. Hort. Soc. 26: 351-362 (1901), as follows:

1. L. humboldtii: Fresno Co. to Tehama Co., lower Yellow Pine belt in open woods. 1400 to 3500 ft. Bulbs 2-20 in. diam. Stems 4-8 ft. ft. (In Sacramento Valley scattered for miles "along river" in oak woods).

   Var. magnificum (San Bernardino mts. to Santa Barbara). Var. Bloomerianum (San Diego Co. high mts.).

2. L. columbianum: not recorded for Cal. by Purdy.

3. L. roezlii: s. Ore. See p. 60, seq.

4. L. paradalinum: L. Cal. to B. C.

5. L. parviflorum: bulb, foliage and capsule of L. parvum and revolute fl. of L. paradalinum. N. + cent. Sierra Nevada, 1500 to 3500 ft. "Rhizomes seldom branch, ∴ never forms masses as that species does"? ? antecedent of "that"?

6. L. parvum: "found only from 5000 ft. to the subalpine regions of the Sierra Nevada in the Lake Tahoe Section" 5-6 ft. h., higher altitudes a foot or two.

7. L. maritimum: peat bogs, dry sandy barrens, forest borders; seldom over 3 mi. from ocean; San Francisco Co. to Mendocino Co. max. height, 5-6 ft. Rhizomes never branch.

8. L. occidentale: "might be described as L. maritimum with revolute fls.; bulb is exactly that of maritimum.

9. L. parryi: 6000 to 10,000 ft., S. Cal. & Ariz.

10. L. washingtonianum: San Diego Co. to Mt. Shasta, 4000 - 8000 ft., usually in thick growth of manzanita, ceanothus, cherry. Bulbs 7-15 in. in circumference. Var. minus: Mt. Shasta (p. 358)

10c. L. purpureum v. sp: Siskiyou mts., s. Ore. to Columbia River. (p. 359.) Var. in Humboldt Co. & Trinity Co., fls. open white soon turn pink.

11. L. rubescens: S. F. Bay to Humboldt Co., coast back for 50 miles; on ridges in the open redwood forest; growing in underbrush of Vaccinium and Gaultheria; n. slopes amongst Tan oak; inner edge Redwood forest; among evergreen oaks on cool rocky points. Most deliciously fragrant of all lilies.

12. L. Kelloggii: bulb of small rubrscens; darker similar foliage; peduncles curved; buds pendent; segments of

perianth closely revolute; border Redwood region, same conditions as rubrscens.

13. L. Bolanderi: border of Cal. & Ore. 50 mi. from coast; underbrush in open woods.

Bulb, leaf and stem resemble rubrscens and Kelloggii. Flower erect, "nearly open".

Fl. Cal. Bibliog. - p. 309, -
Add Carl Purdy, Gard. & For. 10: 502 (Lilium parvum = parviflorum). Perhaps there are other missed articles.
Add note in Fl. Cal. on L. parviflorum.
Add various varietal synonyms from J. G. Baker's paper, and Wallace, Notes on Lilies.
- cf. C. Purdy, California Lilies (California Florist and Gardener, Apr. 1889, p. 67.).

- Lilium parryi Wats. Deep Creek, San Bernardino mts., 5500 ft., Abrams 2763.

- "Lilium Bolanderi Wats. n. sp. Coast Mts., Curry Co., Oregon. Thos Howell, June 13, 1884," - in hand of Sereno Watson. Kew Hb. The leaves in this example Isabel

of the type collection are in whorls (six altogether) with scattered leaves below. They are remarkably short and broad and only shortly acute at apex, 1 1/2 to 2 in. long, 6 to 10 lines wide; they are elliptic-obovate or oblong-obovate, about 7 in a whorl. Perianth 1 1/2 in. long, funnelform.

-Lilium parvum: Blue Lakes, Alpine Co., 9000 ft., Hansen 543. Bear River, 5500 ft., Hansen 1923 (Amador Co.). "Valley of South Merced River, Fresno Co., Coville & Funston 1844; Lake Tahoe, J. Ball, July 20, 1884.

— Lilium Bolanderi Wats. The plant collected by Bolander, 6558, is here at Kew, and is labeled "Red Nts. Humboldt County", Geological Survey of California, 1860-67 printed label. I should say that Purdy is right and

that Bolander's plant is different from that of Howell:

1. The leaves are different in size and in general type. They are longer in the Bolander spm., 2 1/2 to 3 in. long, 3/4 to 1 1/16 in. wide.

2. The flowers in Bolander 6558 is of an entirely different shape. In Howell's plant the segments of the perianth are only slightly spreading (funnel-form), 1 5/8 in. long. The flowers in Howell are tipped a little below the horizontal; spreading, answering thus to Watson's description which is plainly as to the fl. anyway based on the Howell plant and not on the Bolander plant. The flower in the Bolander plant is quite erect, the segments strongly recurved 2/3 the way up, total length 2 3/8 inches! The segments in the Howell plant are

broadly linear-oblanceolate, the segments in the Bolander 6558 are elliptic or ovate, blades 1 in. long or nearly, with the blades borne on claws! slender claws! 1 in. long. It would appear that revolution is from the upper 2/3 or 3/4 of blade. But the flowers (in this spm.) is imperfect and there is but a single one.

It must be noted that Watson says "6558 in part" and therefore this spm. may not represent the plant he was describing.

It is desirable to settle the problem of "Red Mts. Humboldt County". Did this mean Red Mt. in northern Mendocino Co. near Humboldt line? Or is there a separate Red Mt. in Humboldt? note that Watson in Proc. Am. Acad. 20:377 says "Red Hills, Humboldt County".

There is also a plant by Rattan, "Humboldt Co." July, 1878, which is pretty surely a duplicate in the collection referred to by Watson, l.c. One may say certainly because it was received from the Gray Herbarium, the label in Watson's hand. When Watson separated Rattan's collection of this species, he did not trouble to write out the label in full, but simply put "Humboldt Co."; leaving off the Arcata. Watson did this a number of times, in sending material here to Kew, copying only the "high lights" of the label. In any event the Rattan sheets (2 of them) are quite like Bolander 6558 as represented here, — in flowers (size and recurving of perianth-segments and in claws) and in foliage!! It is likely that L. howellii does not occur south of Del Norte County.

— Cont. from p. 53 at *. It is rather odd that in no work consulted is anything said about propogation

by scales in the case of the dry-land species in Cal. Purdy, I think, refers to propogation by scales in the case of those species with jointed scales. In the case of species with non-jointed scales, he says nothing as I remember. It is my idea that in T. washingtonianum the bulb-scales on the outer part of the bulb decay at the end of the season, but do not spontaneously detach and form new plants. In the case of dried (pressed) bulbs or spms. for herbarium preservation, the scales persist in all our non-jointed species. In jointed-scale species they shatter into separate joints more or less.

— L. roezlii Regel. From the standpoint of species in the Flora of California this probably does not require recognition. Baker, Jour. Linn. Soc. 14: 243 cites Hartweg 2003 as

of this sp. no. 2003 is Santa Cruz Mts. The spm. is here in Hb. Benth. It would be L. pardalinum to me.

— L. Kelloggii Purdy. As it occurs in cult. in England, it is very distinct in fl. shape, color, sprinkled dots on lower half of segments.

I once sat on the verandah of Shepherd's Hotel, Cairo, watching the stream of humanity flow by and reflecting on the old saying that if you sit there long enough you will see everyone in the world of any consequence pass. Here at Kew, stopping long enough, one may meet all botanists. Today came in J. C. Willis ("Age and Area") who called on me in California some 25 years ago. He is now white-haired and retired; lives in Switzerland.—

Sept. 13, 1935
Kew.

Kew, England.

— Today, July 24, I was invited to luncheon by Colonel C. H. Gray, who lives down in Kent. He is here at the Herbarium studying Brodiaea. Took me to a tea house near the garden and we talked of Californian Liliaceae, which he grows in this garden. He asked me if I kept up Brodiaea without dividing it, and I explained that I did, and why it was in a large sense a natural group though having members of considerable differences. If Brodiaea is divided many other genera must be, and genera will thus be enormously multiplied, — to no satisfactory course. Gray at once agreed and pointed out that Calochortus could with more reason be multiplied. I told him of my rediscovery of Brodiaea californica; that, in

cultivation in England for one hundred years, and thus continuously known to gardeners and botanists here, it had become lost to Californians, but that I had found it in flower at a spot that must be Hartweg's original locality or near it. Gray reacted at once to my description of its very coarse bulb-coat, of thickly woven fibers quite unlike any other species of Brodiaea. Gray asked about Carl Purdy and I told him of Purdy's garden and the way in which he came into it. I said: He is a man of of great nobility; a man of strong character and high purpose. When you stand in the presence of the man, you know at once that you are having an experience to remember, that here is a man clear-minded, far-seeing and gifted with

a rare sagacity. A quarter of a century ago Dr. Arthur W. Ryder, Professor of Sanskrit in the University of California was my companion on a botanical trip to the Ukiah Valley. I introduced him to my friend Geo. Wilcox, a photographer by profession, but with the soul of an artist. In him burned the fires of genius. Also we met Colonel La Motte, a man who had thought much and pondered wisely. Finally I brought him to Purdy. Ryder could contain himself no longer and said when evening came: I have met three great men today. It is an especial honor to know Mr. Purdy. He is a man".

This from the Professor of Sanskrit is no mean praise; especially when one remembers the keen thrust of his rapier in dealing with men

who go in for success by the arts of pretense.

Colonel C. H. Gray was much interested by my account of the early life of Earl Purdy and said that he had corresponded with him for twenty-five years. The Colonel's name is spelled Grey. See his address, p. 201 seq.

Miss J. M. Saunders,

— My artist and myself, went on a walk along the Grand Union Canal at Brentford — hundreds of barges, often with families living in their gaily-painted prows — spending their lives there! men, women, children, water gipsies!! It was a picturesque sight with the old houses of Brentford in the back ground. Along the towpath we went, meeting a tow horse with its driver, and the man on board at the helm — it takes always two men. From this scene we came, up the canal

Kew, England

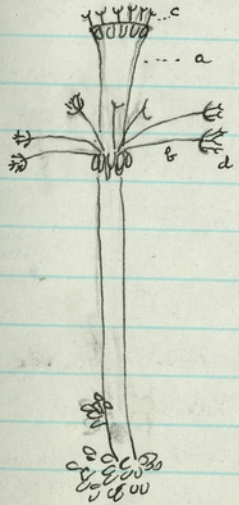
further to a view, across the river, over a fine meadow backed by a row of stately trees, — all the field alive with players of cricket in white, with other persons enjoying the open air around the meadow — no more characteristic English scene. —
July 24, 1935.

— "Actinotus sinensis, published in the last volume of 'Icones Plantarum' (vol. 8, n. ser. pl. 1740, — 1888) proves to be based upon a trick played upon us by one of Dr. Henry's Chinese collectors. It is made up of the inflorescence of a Viburnum inserted artfully into the terminal bud of Aesculus chinensis." — D. Oliver, June, 1889, on a printed slip pasted in against pl. 1740 in vol. 8 of Icones Plantarum.

Oliver was not completely fooled, really, because he noted in the original description that the compound leaves

Cont. p. 67

Teratology.



a. = fasciated main stem or perhaps better ray.
b. = rays (slender, ending in an involuc. of fls.), normal.
c. = fls. borne on terminal fasciated involucre. Eriogonum umbellatum Torr. in Hb. Kew.
d. = involucre and fls.

Whitney Mdws., Tulare Co.,
Coville & Funston 1656.

Cont from p. 66.

"are almost precisely those of an Aesculus". It is my remembrance that Dr. A. Henry, whom I knew at Kew in 1905, told me that he offered a premium to those Chinese bringing in new things. — Kew, Aug. 1, 1935. There is

Kew, England

humor in Oliver's statement, however, that "It is certainly one of the most remarkable of the many important additions to the Chinese flora which we owe to this [Henry's] persistent energy." Rather, the energy of the "Heathen Chinee"! [cf. Fake Species in Forest Botany Lab., — see Men and Manners, vol. 9, p. 120.]

— Today, Aug. 2, I invited Dr. Alfred Rehder of the Arnold Arboretum to luncheon at the Star and Garter, just over Kew Bridge on the Middlesex shore of the Thames. He said that there had been no director of the Arnold Arboretum since Sargent died. Wilson's title was Keeper of the Arboretum, while Ames is Superintendent. He seemed to think, as did I, that Merrill* would enthrone himself at the Gray Herbarium. I asked who would succeed Robinson as Asa Gray Professor of Systematic Botany? Rehder replied that he thought Fernald would but

* the new head of all Botany in Harvard. [E. D.]

was not sure. It is unlikely. Merrill will take that job for himself. Rehder admitted that Fernald might not care much about the routine care of the herbarium. Rehder thought the new arrangement, "the new co-ordination" at Harvard as to the various centers of botany was brought about by Conant, the President. Maybe. But I am thinking it likely that E. D. Merrill engineered it from the outside. cf. p. 24 ante. Rehder says no smoking is allowed in the Herbarium of the Arnold Arboretum. We discussed whether Merrill smoked. There seemed to be agreement between us that we had never seen him smoking. It occurs to me now, however, that when he is at a general meeting of botanists, at a "smoker" he conforms to general practice. [I fell far out on this. Merrill (Merrill) smokes a pipe and smokes a great deal. He pooh-poohed* the regulation against smoking in the Herbarium of the New York Botanical Garden. Cont. p. 47.]

* Merrill to me.

Kew, England.

— A.A. Bullock, Assistant in the Herbarium reminds me that Sir Joseph Hooker refused to make keys to species, believing or rather holding that it led to superficiality. Asa Gray made no keys. Hooker made conspecta of genera, as did Gray. Gray made conspecta of species, running the lines in as interpolated headings between groups of species.

Bullock (A.A.) says W.E. Brown wrote out carefully diagnoses of his species of Euphorbiaceae and Asclepiadaceae before determining the names, when preparing his manuscript of these families for the Flora of West Tropical Africa.

I remarked that Bentham urged a study and description of a spm. before attempting to determine it by the books.

Wisley, Surrey, Aug. 17, 1935.

— went to Wisley, the gardens of the London Horticultural Society. Mr. E.J. Baker took as his guests Fraulein Büchner, Fraun Vivi Tackholm and myself. We went by bus from Kingston. It was very pleasant (I always find it so) bowling along through the English country-side on top of a coach. The garden beds — flowering annuals and perennials — contain many fine things and we spent hours on end amongst them. Baker knows a lot about garden plants and we had a fine time, in many cases, guessing the family. Most of the plants had a genus name, many a specific name. The rockery gave us much delight. The gladiolus beds are in fine fettle now and the general layout of everything is attractive. The grass walks through the shrubs area seemed like the paths of Paradise. Mr. Baker

kept up a running comment on things which kept us on the qui vive.

On the way out, Baker pointed out the neighborhood where Hewitt Bothrell & Watson, the celebrated topographical botanist lived. He and J.G. Baker, the father of the present Baker, were very good friends. When he died, J.G. Baker was his executor. Watson left a goodly sum to the Bakers and on this sum (the income from) J.G. Baker takes his holidays each year. So, as he expresses it, he has reason to be most grateful to his memory.

Baker also told me a story about the westerly corner of Richmond Green, near which stands the house occupied by Queen Elizabeth when she lived in Richmond. I had myself noted the considerable number of lanes, courts, roads and houses in that

quarter which had been named in commemoration of the Virgin Queen. It is of a recent day, however, that Baker's story runs, namely that the house was occupied by Drunkinfield H. Scott, the paleobotanist, and that he gave teas (to botanists) and held receptions in the rooms which Elizabeth used for state functions. — Aug. 17, 1935.

Cont. on p. 77 seq.

On the way the train passes Strawberry Hill station and I exclaim: That means Horace Walpole!! Cont. p. 77 seq.

— Went to tea this Sunday afternoon (Aug. 18) to the Dallimores on Kew Green at Hanover House. Mr. Dallimore said that his dog shows the greatest jealousy of the horses when he goes down into the meadow to feed them. One of the horses is very arrogant and would take all the apples from the other horses if not prevented. But the dog differentiates not at all between the horses. Yet the dog will go out into

the road and bring in, not a fine well-fed dog, but the shabbiest worst starved cur that he can find, give him water, and share his food with him.

Mr. and Mrs. Dallimore told a story of the first (?) Earl of Westminster. When at his country place in Cheshire Lady Grosvenor said to the lodge-keeper: See how healthy and rosy your children are. And look at my boy, so pale and thin! What do you feed your boys? Oh, nothing in particular said the Lodge keeper, they get what they can. Well, let me put my boy with yours. So it was agreed, but it was distinctly understood that Lady Grosvenor must not come around. However, her curiosity got too much for her and after four days she went down to see how things were. She approached

and looked in. There was a great porridge bowl, in the center of the table from which common dish each boy was eating from his own side. But one boy cried out in huge protest, Tom Grosvenor is eating all the dis-dable (that is the milk and sugar in center, supposed to be shared equally!).

We talked about dialects in England. One young woman present referred to the fact that Devonshire children were taught proper speech in the schools, but relapse to the vernacular on reaching home, speaking as their family speaks. [Much of that sort of thing occurs amongst University of California students. In the class room they are held to a certain standard in many respects, as to speech, thought, highness of ideas and value of subjects worthy of consideration. But the moment of leaving the class room, amongst themselves their conversation becomes puerile or cheap]. Mr.

Kew, England, Aug. 1935.

Dallimore said that one of the Boys of Kipling's Stalky & Co. lived as a man on the other side of Kew Green.

On Friday, Sept. 13, I took a bus from Richmond to Surbiton where I got an electric train to to Guildford, the county town of Surrey. Outside the station at Guildford I asked a "Stop Me" man (ice-cream push cart): "Where is Boxgrove Av"? He looked at me curiously and said: "You going to walk"? "Bus," replied I, "if there is one". Said: "Go there. Turn right; turn left. Straight away to the Far Station". So I did as directed. After getting a certain distance I enquired for the "Far Station" and everyone understood me. I passed it by 40 yards and was sent back. There I saw in a side street the "Blue Salvon" bus I had been told about. I took it. The driver set me down at Boxgrove Av. Soon I found out "Kennet", home of Hilda Jepson. I was admitted by her mother, a woman of refined appearance and manner, say 75 years of age. Miss Hilda Jepson appeared, a wholesome good-looking Juno of 30 or 35. Also there Miss Charlotte Jepson*, most wise and witty with a zest for talk and good laughter; one of the saltiest shrewdest observers I have met in years; a conservative but very gay about it; a liking for exposing pretense good-naturedly; a capitally interesting companion. She has no use for Edgar Jepson's books. tried to read one and put it in the fire when half through it. [Cont. p 40]

* See p. 202.

Wisley, Aug. 17, 1935.

Cont. from p. 73, near top: Excursion to Wisley.

At last we seated ourselves on a pleasant rockery with lawn about it, to rest a bit and talk of what we had seen. Then Mr. Baker asked: "How is your Flora of California coming along"? And he told the others what I had been doing of old. So I told them all how prosperous the Flora was just now, that volume one is in print complete or nearly; that volume two is now being set by the printer; and that I hope the half of volume 3 (Mrs. of) is essentially done. Whereupon Frau Tackholm inquired: "How long have you been working on your Flora?" "Forty years," said I, and over. "Forty years"!! cried Frau Tackholm, "forty years"!!! So long!! Well I do not then feel so badly that I have been working already seven years on my Flora of Egypt!" (Cont. p. 82)

Natural History Museum, S. Kensington

— Went today with Miss M. L. Green in to London to the British Museum (South Kensington). On the way we stopped in Kensington High Street and had a luncheon at Derry and Tom's restaurant, the first good meal (at a restaurant) since I have landed in England.

Arriving at the Natural History Museum, Miss Green began at once to look up the original publication in which Rauch published the binomial Abies mucronata. According to Carriere, Traite des Coniferes, 329 (1869), Rauch published such a binomial. The only work of Rauch listed by Pritzel, ed. 2, is Régénération de la Nature Végétale, 2 vols. (1818). Miss Green went through both volumes page by page without finding a hint of the ↑ name. In general plants were indicated only by their vernacular names. See p. 83.

With me I had brought a large packet of Monterey Arctostaphyli for comparison with the type of Arctostaphylos tomentosa Pursh, resting on a collection by A. Menzies. It was not difficult in the large number of sheets furnished me by Dr. Jos. T. Adams, my graduate student, to find specimens matching well the Menzies plant. — Aug. 20, 1935. If there is no Abies mucronata Rauch, then the Abies mucronata of Rafinesque (1832) is not a later homonym, and is valid as prior to Abies (Pseudotsuga) douglasii Lindley (1833). Abies mucronata Raf. (1832), may not be, really, effectively published. I cannot say. The fact that it was taken up by Sudworth as Pseudotsuga mucronata (1895) is a little against it because Sudworth was striving for novelty, to upset things. See pp. 83-84 seqq.

— Coming along by my alcove in the Herbarium, Miss Green notes my little stack of field books, bound in black morocco leather, compact volumes, and says: "They look like prayer books"! I reply: "They are prayer books. They are carried into the field and I am always on my knees in the field, am I not!"

— A young botanist, H.K. Fletcher, of the Royal Botanic Gardens, Edinburgh, brings me three sheets of Saxifraga which belong to the Jeffrey Collection in the herbarium of the gardens, to name. It seems that the librarian at the gardens is preparing a list of Jeffrey plants for publication, and noticed that one of the determinations seemed inadmissable. So the sheets were put in charge of this member of their staff to bring to Kew for determination. So I introduce

him to Howell's Flora of Northwest America, Piper's Flora of Washington, and Piper & Beattie's Flora the Northwest Coast!

— T. A. Sprague, Deputy Keeper of the Herbarium, takes on many responsibilities. He is now Librarian (in place of A.S. Skan retired) as well as Deputy Keeper and has various duties as to the Botanical Magazine and Index Kewensis. I take it he is really the responsible official for the latter over Miss Green. He rushes around a lot, and uses up much energy. Passing my alcove in a hurry one day he tarried a second and said: "O.D.T. double A". It seems that this, translated, means "One damn thing after another."

When Sprague passed hurriedly on I jotted down the letters O.D.T. A.A. and cogitated. There was, soon, a solution as a result of cogitation.

Wisley, Surrey, Aug. 17, 1935.

Cont. from p. 77 (bottom). One of the most stunning plants in the gardens, one of many!!, was Rudbeckia maxima - the heads maximus!, the leaves very large, very glaucous, entire!

Passing through Cobham I saw the sign "Bespoke Bootmaker". I asked Baker what it meant? He did not know. But cogitating a moment I am sure that it means "Boots to Order", not ready-made.

Frm Jackholm talked about Dr. Eric Hulten who in his Flora of Kamtschatca is tracing so many species of Asiatic plants along that ancient migration highway into America (cf. p. 201 seq.).

✓ No. 17,365. Erica vagans

Grows only in Cornwall. Collected at the Wisley Garden (where cultivated).

✓ No. 17,366. (Discarded) Genista aetnensis

Cult. at the Wisley Garden; native of Mt. Aetna.

Kew, Aug., 1935.

— The Keeper of Manuscripts at the British Museum says, in reply to a letter from the librarian here at Kew, written at my request, that there are no manuscripts † in the British Museum. He says they have two titles of F. A. Rauch:

† By Thos. Nuttall — 23 Aug. '35

— F. A. Rauch, [Cont. from p. 78 ante]

Harmonie hydro-végétale et météro-logique ou recherches sur les moyens de recréer avec nos forets la force des températures et la régularité des saisons par des plantations raisonnées. 2 tom.

Paris, an X (1802). 8°

Plan nourricier, ou recherches sur les moyens à mettre en usage pour assurer à jamais le pain au peuple français, ainsi qu'à rendre le commerce des blés vraiment légal, etc. Paris, 1792. 8vo.

A letter to Mr. E. Nelmes, Kew,

of the library, gives the above two titles as in the British Museum library. The latter is written by V. Scholderer, Aug. 23, 1935. Cont. p. 91.

This whole matter, the search for the place of publication of Abies mucronata Raunch, relates to the problem of the right name for the Douglas Fir. I have been using the binomial Pseudotsuga taxifolia (Lamb.) Britton, based on Pinus taxifolia Lamb., the first describer. But for Pinus taxifolia there is a prior homonym, Pinus taxifolia Salisbury. This last does not represent a good species, but that is no matter under the new rules. So the next binomial in order is Abies mucronata Raf. which would become Pseudotsuga mucronata (Raf.) Sudw. But there appears to be a prior homonym for this, namely Abies mucronata Raunch. If this name were validly published, then we would get, happily, Pseudotsuga douglasii

— Went to Bagshot Heath in Surrey as the guest of Dr. J.B. Hutchinson. He took me in his car, with two of his daughters, Joan and Violet. We stopped first at his house on the Great West Road where I met Mrs. Hutchinson and the two youngest children, Nora, and her little brother John. There is another boy, Allan, in between the younger children and the older girls that I did not meet. We drove by way of Windsor Park to the heath where Dr. Hutchinson has a week-end bungalow. From the bungalow we took a walk to the top of a near-by ridge whence there was a fine view in several directions. Returning to the bungalow we had a hot luncheon. On the way to the ridge I collected the following plants on the heath:

✓ No. 17,367. Hieracium

Bagshot Heath, Surrey, Aug. 25, '35.

No. 17. 368. Hieracium
Woods.

No. 17, 369. Myrica gale
Forming rounded bushes 3 to
5 ft. h.; swampy ground. Male plant.

No. 17, 370. Myrica gale
Female plant.

No. 17, 371. Narthecium
(To UC to mt.)

No. 17, 372. Calluna vulgaris Salisb.
Ling. (To UC to mt.)

No. 17, 373. Erica cinerea L.
Bell Heather.

No. 17, 374. Juncus squarrosus L.

No. 17, 375. Hieracium

No. 17, 376. Pyrus aucuparia
Gaertn.

Coming back to Dr. Hutchinson's
home on the great West Road, we had tea.
His children: Violet, Joan, Allan, Nora,
John. The last John, about 4 years old; the
oldest about 17.

Kew, Aug. 27, 1935

— Took Dr. Sprague to tea at the
Orange Tree this afternoon at the
tea room. He complained strongly that
Dr. J. Burtt Davy of Oxford wrote
to Kew for the correct name of a
tree under the International Rules,
that he would write independently
to the British Museum (Natural
History, South Kensington), that
he might, and did in one case,
get different answers and tried
to involve Kew and South Kensing-
ton in controversy. So that Sprague
said to him: "Look here: you must
choose one place as your guide
and not use two institutions and
attempt to get us into quarrels.
I am too busy for that. If
you want us to say what the
correct name should be, all
right; but then in that case
accept our authority. If you

do not like our authority, well and good. Use South Kensington or anyone you please." — Aug. 27, '35.

— E. D. Merrill, Director of the New York Botanical Garden, came and sat down by me in my alcove in the Herbarium this morning. He told me all about his going to Harvard University but scarcely anything new. Fernald has been made Asa Gray Professor of Systematic Botany and Curator of the Gray Herbarium, with C. A. Weatherby attending to the routine duties as Assistant Curator. Weatherby has been, all these years, a volunteer worker (without salary) at the Gray Herbarium, having an income of his own. Now, under this new change, he is given a salary. Howe has been made Director of the New York Botanical Garden to succeed Merrill. Gleason, Assistant Director.

Merrill says he plans to bring all the herbaria at Harvard under one roof — the Gray Herbarium, the Farlow Herbarium, the Herbarium of the Arnold Arboretum, but has not decided where. Merrill says he told the administration at Harvard that there is an asset not usually thought of there in a practical way and that is that the name of Asa Gray is still one to conjure with. Merrill told me in particular how he came to be invited to Harvard — making it plain that he did not bring about the invitation himself. Merrill came and visited me again, appearing on rather pretending to be very friendly. Sir Arthur Hill invited me to dinner one evening at his home. Merrill was there. Merrill went to dine with Setchell in Whitehall one evening. Later I saw him much with D. Hoagland — especially on the journey from Amsterdam. Merrill knows well how thoroughly

(Cont. p. 111.)

— This morning at 9:30 I asked Marshall, assistant in the library, if Dr. Sprague had come. "No, I do not think he will arrive until 10.00." Ten o'clock seemed to be his usual hour, and this rather confirmed it. — Aug. 28, 1935.

(See p. 91.)

— Miss M. L. Green complains strongly that Dr. J. B. Davy wrote to the Director at Kew, Sir Arthur Hill, complaining of certain statements she had made in her paper on the present rules of nomenclature for 2. 2. The Director referred the letter to Sprague who found the statements not questionable. Miss Green said that when Davy next met her, he greeted her with friendly effusiveness. Her eyes flashed fire and she exclaimed to me: "How I hate and detest that kind of hypocrisy". Sprague is equally or even more hostile in his attitude to Davy. cf. p. 87 ante. " p. 49 ante.

— In behalf of Miss Green, I had occasion to look up the synonymy of Pseudotsuga taxifolia Britt. I turned to various silvas — Sudworth and Jackson, Elwes and Henry and various others, without any real satisfaction. Then I bethought me of my own Silva of California which contains fully and accurately all that is necessary as to synonymy. Miss Green remarked this as true — that they had found my Silva accurate and full.

— Cont. from p. 84.

Rauch, F. A., Harmonie Vegetale.

I find few binomials:

p. 277, l'heracleum sibiricum (italics)

vol. 2, p. 200. myrica cerifera

The legend for the frontispiece, vol. 1. is:

"La France régénérée, vous demande à recréer cette belle nature sur toute sa surface".

Neither Abies or Pinus are mentioned in these words.

I go through the Harmonie Vegetale page by page and find that Rauch in referring to trees always uses vernacular names, never Latin binomials, except when he quotes other authors as above.

I also went through the "Plan Nourricier". This was quite hopeless. There was no suggestion or likelihood of its containing any Latin binomial.

London to Amsterdam

Left Kew for Amsterdam, on Saturday evening, Aug. 31. Went to Liverpool station where is a special train (8:54 pm.) carrying the botanists who go to the Botanical Congress. Train crowded. Reached Harwich about 11:00. On the steamer found the cabins for two persons much like sandwich boxes. Maybe sardine boxes would be better. When my cabin mate came in I remarked that in my country such a sleeping place would be construed as a violation of the "cubic air ordnance". This man proved to be Dr. F. Fritsch*, algologist, London, who has been in California. He did not occupy the cabin with me but spent the night on a lounge in the saloon where he could get more air.

At Hook of Holland there was examination of our passports and a perfunctory look at our luggage by customs officials. Then by train

* See p.

through the characteristic flat scenery of Holland to Amsterdam where I went by taxi with Dr. J. B. Hutchinson and his daughter to the Amstel Hotel, a famous hostel.

Went at once to the Colonial Institute where the sessions of the International Botanical Congress begin today, Sunday, Sept. 1. A meeting of the Taxonomy Section is held in the afternoon, dealing with nomenclature*. Two exhaustive printed pamphlets had been prepared for us: "Synopsis of Proposals" (Red Book) and "Preliminary Opinions" (Gray Book). These numerous proposals, many of them concerning small points, took up a lot of time during the whole week. Chief contests raged around:

1. Nomina specifica conservanda. There were large numbers of foresters, horticulturists and economic botanists, as well as many botanists, in

* See p. 97.

favor of this proposal, but it was snowed under by a heavy adverse vote, 208 to 61.

There is, however, no argument in favor of "generica conservanda" but that can be applied to specifica conservanda. The supporters were fairly aggressive before the Congress and so had prepared a substitute: the preparation of a list of 100 names of economic plants, the names to be determined under the International Rules, and to hold good for 10 years.

How absurd!! If a name under the Rules is the name you want, then you need no special legislation like this. Any one can prepare this own list. That is what the rules are for. On the other hand, in case of Sequoia gigantea, it has no standing under the Rules, Present, Past or

American Code. What more could Botanists ask than that a name like Sequoia gigantea Dec., properly and adequately published, should be accepted and used by the whole world, as it has been. Not merely by scientific men, but by layman everywhere. The ten year proposal is especially silly. Who wants to use a name that may go out in that time? If one cannot now, determine what a name is to be, the Rules offer nothing for fixity, which is the most important element in nomenclature.

2. Citation of the author who makes transfer of a specific name even if he misapplies the new binomial to the wrong plant. Kew stood strongly for this and most botanists with them; British Museum was against. The vote was 217 to 40, in favor of Kew. The case cited was this: Pinus

mertensiana Borg. (Alpine Hemlock). Tsuga mertensiana Carr. (not Alpine Hemlock). Tsuga mertensiana Sarg. (Alpine Hemlock). for Alpine Hemlock

The accepted binomial is Tsuga Mertensiana. To cite Carriere is to quote him for what he did not say. The other argument, which prevailed was, technically, that it is necessary to cite Tsuga mertensiana Carr. as the author of the new combination.

T. A. Sprague spoke for Kew; Dr. Ramsbottom for the British Museum.

3. An author sometimes publishes alternative names, as:

1. Andropogon Bequaertii DeWild spnov.
2. Cymbopogon Bequaertii DeWild nom. nov.
3. Bequaertii DeWild nom. nov.

The illustration was offered by W. Robyns* of Brussels, who added a third binomial arbitrarily. He said that he had in mind a case of three names used as alternatives. There was long and persistent debate on this proposal. (but could not recall them. It was possible to reject, referring to the specific case all three names, to accept the first and reject the other two, to accept all three as validly published.

* Reporter in French for the section.

- Blakeslee, A. F., introduced himself and invites me to come see him at Cold Springs Harbor.

* Cont. from p. 97. The Systematic Botany section opened with E. D. Merrill presiding, A. A. Pulle* as Recorder. First was submitted proposals for committees on Spermatophyter and Pteridophyter, committees on Musci, on Hepatics, on Fungi, on Algae, on Diatoms, — mostly with the problems of Beginning dates in nomenclature to deal with. A vote of thanks was passed on account of the labors of the nomenclature committee. The members rose and stood in respect to the Rapporteur-General of the last Congress (1930) who has since died.[2] T. A. Sprague rose and made an extended account of the proposals to be put before this Congress. A lot of discussion rose on Art. A 19, Willmott's motion for the rejection of certain works. Sprague (Kew) spoke against it; also Harms (Berlin), Ramsbottom (Natural History Museum) rose and read a communication from Willmott (Nat. Hist. Mus.) sustaining the proposal. Chiefly in new work Adanson's works where are many generic names that would have to be taken up on the priority rule and so muddle established names. A committee was set up to study the works of Adanson and make a statistical report on names that would be rejected, names that would be conserved, names that would come up as problems. Adanson Herbarium now at Paris.

* Utrecht. [2] John Briquet. — over —

98 Cont. from p. 97. Ramsbottom argued for a given author's work as a beginning in nomenclature and not a date. Better for example in Palaeobotany to begin with a work rather than a date. (Date 1820 accepted at Cambridge in 1930).

The general session of the Congress met at 2:00 in the Grand Aula of the Colonial Institute. It is a finely decorated assembly room of splendid proportions. Professor Dr. J. C. Schoute, Prof. of Bot., University of Groningen, presided with dignity and urbanity. He speaks English with great ease and correctness. The roll-call was an impressive ceremony. As the name of each country was called, the delegates rose and received applause.

A feature of this Congress are the excursions. Sept. 4, at 7.00 a.m. four coaches filled with Botanists left the Colonial Institute bound for the Veluwe. Shortly after leaving Amsterdam, my seat mate, Miss M. Kruseman of Amsterdam, an intelligent educated girl, botany-trained, pointed out a swamp behind a wood to our right as the breeding place of the Spoon Bill. This spot and the one in Hungary are its only known breeding places in Europe. We run through towns and villages and see much of Dutch life and landscape in this flat country. Occasionally we come to areas of heath.

On the Treek near Wondenberg we stop to examine a profile exposed by a pit dug for our instruction. At this point I collect nos. 17,379 and 17,384. We run on, and come to a fine wide heath on which there are scattered remnants of the primitive oak forest. The soil was collected No. 17,381 and Calluna (No. 17,382). These two near Garderen. At Oddelemeer we stop for morning tea. I take advantage

99 of the stop to explore a near-by swamp, and collect a few numbers. See p. 100. We go on again, to a range of low hills, leave the coaches and walk over a wide moor, Elspeter Heath, perhaps better Elspeet Heath. Empetrum nigrum, no. 17,392, is called to my attention by Prof. Dr. Rolf Nordhagen, Bergen, Norway. A species, E. hermaphroditum, has been separated from E. nigrum. It has a quite distinct (geographical) range and is common in northern Norway. Since it has become known, it has been found in Labrador, acc. Dr. J. Einar du Rietz I think, who took up the same matter with me. He says that the two are unlike in appearance and easily distinguishable in the field. E. hermaphroditum is marked by the vestiges of stamens which persist on the berry. Nordhagen is working on Dicentra and says that only two species, D. chrysantha and D. ochroleuca are destitute of wings on the seeds. The other species have wings on the seeds. Ants collect the seeds, eat off the wings and reject the rest.

We run on, not a great distance, to the top of the ridge we had seen in the distance where there are fine sand-dunes in an afforested region, the Veluwe. Here I collect nos. 17,393 to 17,395. There was much discussion by members of the party as to the nature of the sands, as to whether they indicated the presence of glaciers in the ice age. A young Norwegian, about 22, from Bergen, disputed in a lively manner with a young Dutchman (one of the botanical guides of the party) and the Dutch girl, Miss M. Kruseman. The chap from Bergen depreciated derisively the evidence that

Veluwe Excursion, Holland

On the excursion to Veluwe I collected the following plants.

No. 17,377.

Fern. At Uddelemeer

No. 17,378. Erica W. of Apeldoorn

with 17,377.

No. 17,379. Betula **occidentalis Hook.**

Wondenberg with 17,384

No. 17,380. Phragmites communis to UC to mat

One of the dominants in the marsh. With 17,377.

No. 17,381.

Near Garderen. Yellow legume. First heath.

No. 17,382. Potentilla

Uddelemeer.

No. 17,383. Rhamnus **frangula L.**

Uddelemeer.

No. 17,384. Juncus

Treek, Wondenberg. W. of Utrecht

— The weather a little showery today. Some persons say the climate of Holland is eight months winter and four months bad weather! But our work here has been very fair.

On a wide heath, not far from the noon stop the following were collected: ↑ Elakeet Hearth,

No. 17,385. Polypodium

No. 17,386. Cladonia rangifera perhaps. This lichen was an important constituent of the cover. With 17,378.

No. 17,387.

Ericaceous undershrub.

No. 17,388. Quercus robur L.

Given to UC for exchange (same as 17,389)

At the noon stop, the following:

No. 17,389. Quercus robur L.

to UC

No. 17,390.

Ericaceous undershrub.

No. 17,391. Erica

No. 17,392. Empetrum nigrum

Velmer Excursion, Holland

On the sand-dunes at Velmer, last stop, I collected the following:

No. 17, 393. Senecio

No. 17, 394. Carex

No. 17, 395.

Fls. blue. Composite, presumably.

These sands were of glacial origin. He proposed all sorts of alternatives, that these dunes might lie in an interval between the horns of a glacier, that materials might have been water-borne. The Bergen botanist asked about erratics. And how large? About as large as a hen's egg he was told. At this he laughed heartily. He was told that large erratics had been found to the east and the west. One particularly large one was referred to by the Dutch girl as being preserved at a certain village. Yes, said the Bergen chap, I'll admit that one. I suppose you have put a copper plate on it — that erratic!" The Dutchman defended his theory; the Dutch girl held that the erratics were Fenno-Swedish! which the Bergen man admitted. The Dutch girl when pressed, or asked questions that could not be answered, said: "I do not know." This honest reply, on account of the nature of the argument, often gave her the advantage in this disputation contest. The young Norwegian was right in his element. Coming from a country where terminal moraines, glacial-engraved rocks and pavements are as thick as automobiles in Telegraph City, he was disposed to ridicule these slight or occasional evidences of glacial sands.

Dr. J. E. du Rietz greeted me in the woods near the noon stop (which was in the forest before reaching the sand dunes). I had met him at Cambridge in 1930 and at Kew in the same year. He is working on bipolar distribution and is at present using the genus Carex. He is especially anxious to secure facts and materials of Carex Lachenalii and C. paparaica. He referred to an unrecognized Arenaria in Labrador which M. L. Fernald had distinguished and named as Arenaria cylindrocarpa, it having been passed over and confused with other Arenarias. Fernald brought out the significance of this species; it was not a mere naming of a new form. He showed that this

species was one which occurred in the refuges between the sheets of glacial ice; that is, it has persisted only because there were such "islands" not covered by the ice-sheet. The species, therefore, had an especial interest and Dr. Rietz increased that interest by finding this same species in Norway, discovering it on the same kind of refuges between the ice!! — in like situations to those in Labrador! However, in working over the literature he found in reality that this species had been published previously, — not in America, but in Europe, by Wahlenberg, who had named it Cerastia humifusa! [This to my mind illustrates well how inept it is to claim that a man is injured by publishing species as new that are not new. It all depends on how he does it; on his motive; as to whether he is adding to the sum of significant botanical knowledge, or whether he is publishing only a short formal diagnosis, which whether the species be valid or not valid, adds little or nothing to real knowledge.

One of the men who came and spoke to me was Dr. M. Treub of the Botanic Garden at Buitenzorg, Java. He heard my paper before the Geo-botany section yesterday. Dr. (Miss) Grace Howard of Wellesley College is on this excursion. I introduce her to Dr. Du Rietz who

asked her for someone who knew California lichens. Dr. Howard comes from Washington state and in reply to my query said that she would be interested in receiving California lichen specimens. Another person who introduced himself was Dr. Erling Christopherson of the Bishop Museum, Hawaiian Islands.

The entire party took in the afternoon tea, to which we were all invited by Dr. and Mrs. E. A. Van Beresteyn. On the way to their house, after leaving the coaches in the roadway, we passed a plantation of Pseudotsuga taxifolia. These trees are 20 to 26 feet high and eight years old. The terminal leaders are quite a sight for a year's growth. Dr. J. Jasviet, Arboretum, Wageningen, Holland, a leader on this trip, called out to the party, pointing to the terminal growth for 1935, exclaimed: "Dass, die Baume in einem Jahre machen"!

At the tea-tables I sat with Dr. F. Fritsch, Dorking, Surrey, — algologist. He was in California in 1933 and remarked the color of our sand-dunes — such color as he had not observed on sand-dunes in England or Europe. He and Mrs. Fritsch were most attracted by the masses of Abronia — its effective color. He could not say what it was, he did not know its name, he could not even recognize the family; but Mrs. Fritsch triumphantly got the name Sand Verbena from her people.

Fritsch insisted to his wife that it was not a Verbena, but when he turned to the index in my Manual and found the name Sand Verbena, Mrs. Fritsch was triumphant and said it evidenced his lack of botanical knowledge. Of course he saw that it belonged to Nyctaginaceae.

The tea-tables were well-filled with platters of sandwiches of various kinds. We had offered us tea, coffee, and three or four different kinds of wine.

All the talks, all the demonstrations were in German or French almost indifferently. Perhaps German was a little more frequent. The Germans have always led in field work. (English was used scarcely at all). The large pits or graves which were dug at the various demonstration areas to instruct us in the history of the underlying layers were large and required much labor. These during the demonstration lectures were referred to as "profiles", that is the demonstration was made on the vertical face of the pit. The demonstrations were often quite elaborate. Then we finally came to the sand dunes. On these unstable dunes no pit was dug, but a young Dutchman whose turn it was to talk showed in the point of a spade and at one stroke made an exposure of the surface layers. Then he stood on the slightly sloping dune above the tiny hole

and began his demonstration grandiosely, crying out: "Meine Damen und Herren: hier stehe Ich einen Profilen oben." Everyone laughed. Then he resumed his normal voice and went on with his demonstration.

The way home was mainly by the same route as the outward journey. We passed through the town of Amersfoort with its huge medieval gateway and flanking towers, relic of the old town wall.

Excursion to Leiden, Sept. 6.

This was on Friday forenoon, Sept. 6. We went by bus; and in Leiden directly to the Botanic Garden. Here attention was directed to some old trees, Laburnum anagyroides 1601, Liriodendron tulipifera, 1601, etc. In the Herbarium the specimens are not in pigeon-holes in cases as with us, but in pasteboard cartons, rather small ones (as to height), the specimens each lying in a folder and strapped to it, but not glued down. So that every specimen is in a separate folder! The Director, Prof. Dr. H. J. Lam, talks to us of this Rijks herbarium (National Herbarium): founded at Brussels in 1829 and transferred to Leiden in 1830. Two million spms. in herbarium. "Many a sleepless night to make candidates for degree, 4 years, not a teaching degree, but a professional botanists degree." Many of the prominent systematists were along: Podpera; Rendle; Diels; Ramsbottom; St. Johns; Nelson; Mattfeld; Harms,

A.

the. He (Lam) spoke of Dr. Sirkis Flora of the Netherland. We were shown some old herbals: Herb. Breyne Jacob, Plantae Rariores. Barousiiaceae et Cassubiaceae. anno 1673. This is an actual herbal. The specimens are in beautiful condition as to color of flowers and general appearance. Not insect-eaten!! Sheets of the volume 12 x 18 inches. Another herbal is dated 1668 and attributed to Boerhaave: 15 x 22 inches; 20 specimens on a page of the volume with a key to the numbers on the opposite page.

Excursion to Zuider Zee, Sept. 8.

This was the most delightful trip of all. There must have been twenty coaches of us. I was in the first coach. It was a great pleasure to have as my seat companion, J.M. Greenman, of the Missouri Botanical Garden. I had thought the reclaiming of the Zuider Zee might show us mud flats. We saw nothing of that: but tidy villages; immaculate countryside; highly interesting towns (such as Hoorn, after which Cape Horn was named). We came finally - after seeing much of the grand system of dikes - to a series of villages under the sand-dunes in the region of Medemblik — exquisitely beautiful setting. Sand-dunes perhaps 125 ft. high. At each village, where a stop was made, I wandered around to see Dutch life. In one village, a native Dutch woman stopped me and asked a question in Dutch. I replied: Ich habe kein nederlandische. Whereupon she recognized instantly that I was English-speaking and said: "Ah, therefore you can tell

me the time of day!" An amazing number of Dutch speak English and speak it well. We were taken to the Hotel Amstel on our return from the Zuider Zee.

Greenman and I decided not to dine in the hotel but to go out to a restaurant. While we were in the lavatory below stairs washing our hands, E.D. Merrill came in and Greenman invited him to join us. We went over the canal to a very good restaurant about two blocks away and had much talk. It seems that the tragedy for doctors in Botany at the Botanic Garden in Berlin is that there are no positions available. Merrill said he had found the ideal strapping strips for binding down the glued herbarium specimen: Nashua Gum Cloth and Paper Co., Nashua, New Hampshire, "Gummed White Pencil Cloth". For dark paste that will not spoil: mix powdered acacia with cold water and add a little carbolic acid. Merrill also said that of the edition of Britton and Brown, ed. 2, only 150 copies are left, and that it will not be reprinted.

This evening most of us from England go back to London via Hook of Holland and Harwich. I join Dr. and Mrs. W.B. Turrill going to the train and on the train.

No. 17.396. Senecio vulgaris L.

Zuider Zee. Sept. 8, 1935.

[London, Sept. 19, 1935]
– This belongs on p. 128 seqv. –

As I came down Charing Cross road toward Trafalgar Square this afternoon the Bells of St. Martins in the Fields rang out merrily. They were pleasant to hear, suddenly and not merely because my errands in London were finished, but because from the moment my last errand was done I was on my way home. My last errand was to buy two of Edgar Jepson's books to send to my niece, Doris Pellet, in Spain: "Polyooly" and the "Whiskered Fountman." So now I am on my way home. Saturday morning early I take the local to Waterloo sta; for the boat train to Southampton. Though not so long away from home, I yet look forward eagerly to seeing once more the brown hills of California, because I suppose they have become a part of my Being; in these later years its very essence. – Sept. 19, 1935: So I

shall soon be on that ocean which I dislike so much – But homeward Bound is the more endurable.

– At one of the systematic Botany sessions Dr. J. Hutchinson read a paper on the phylogeny of seed-plant families. Before the session, several days before he was to come on, he confided to me that on account of a nervousness and diffidence which affected his speech, he would be unable to read his paper but that Sir Arthur Hill would read for him. When the time came, however, he screwed up his courage and read it very well.

Cont: from p. 89 at bottom.

I have been mistreated at Berkeley. Why does he trouble to be so friendly with me? I would never trust him. And over and above my mistrust, I would never show anything more than civility to a man who associates intimately with odious enemies. Compare an extremely curious anecdote having Merrill for its subject in "Men and Manners" vol. 9, p. 117 (private journal of W.L. Jepson).

A young woman, New Zealand, introduced herself to me on the Insider Zee trip and took up the question of Pinus radiata as one species or two. It seems that ? Green of New Zealand has been circulating the statement that there are two species instead of one. I did not mean to convey that impression to him in my letter, but he may have inferred it, because I used the binomials Pinus radiata and Pinus insignis. But I used them only as indicating that there appeared to be two genetical strains of the Monterey Pine in the natural woods at Monterey. It is, however, my rather distinct remembrance, that my letter expressed the fact that there has been in California no scientific cultures of Pinus radiata, but that hereafter we may expect an interest in this tree on the part of the Tree Breeding Institute at Placerville. The name

of this young woman is L. M. Cranwell. She expressed the opinion that ? Green was not very reliable.

I have referred (p. 109 ante) to the fact that the Dutch so generally speak English and speak it well. Occasionally they failed in their idioms in an amusing way. We were so many on the excursions that it was necessary to divide into two parties. So a young Dutchman called out: "You must split yourselves in two"! Again, on some occasion we were told to "take off our overshirts and hang them up", meaning our overcoats.

There was an exhibition of Dahlia flowers in one of the great halls at the Colonial Institute. There was also a small but extremely interesting exhibition of cones of Gymnosperms. A branch of Abies pinsapo bore 20 cones 6 to 8 inches long standing in a cluster as thickly as they could stand. Abies nobilis var. glauca, huge cones 8 to 9 inches high in clusters of 3 or 4, the prominent bracts closely reflexed and almost concealing the scales.

← deflexed portion of bract, the exserted part. It is thickened in the middle in such a way as if it consisted of 2 structures.

The foliage is very glaucous.

Pseudotsuga taxifolia, a horticultural form with small cones and extremely spreading bracts! leaves shorter than usual and spreading all around like a spruce.

Amsterdam, Holland.

Dr. Annie May Hurd (she is now married and has another name) is attending the Congress. She came to my lecture on Centers of Plant Endemism in California in relation to Geological History and expressed high appreciation of it. The paper was read before the section on Geo-botany. Many other persons spoke to me about the lecture.

Dr. Hurd brought to me two women from the United States: Doris W. Hayes, U.S. Forest Service, Washington, D.C. (Range Research) and Nellie W. Nance, Bureau of Plant Industry (Mycology and Disease Survey), Washington, D.C.

Various of my students are here: J.T. Howell, San Francisco; Dr. C.P. Sideris, P.P. C.A. Experiment Station, University of Hawaii, Honolulu, T.H.; Dr. Hurd, U.S. Bureau of Plant Industry, Washington, D.C.

I had most delightful hours with my old-time friend, Dr. J.M. Greenman, of the Missouri Botanical Garden. We decided one evening that we would not dine in the Amstel Hotel, but would seek out a restaurant in the old city of which he had a memorandum. We wandered long but never found it; but we did see much of the city and we brought up in a Swiss restaurant in a side street back of the Rokin and just opposite the Dam. Here we had delicious food and a bottle of Moselle. The narrow little street (Kalver Straat)

seemed most quiet when we entered it, but soon after we began our dinner it was filled with a heavy stream of people, out for the evening. No auto could have moved in that dense mass. We soon learned that the street was full of rare restaurants and choice shops.

Greenman says Rothrock, J.T., was his teacher at the Univ. of Pennsylvania. Rothrock had an herbarium of his own (the herbarium of the Wheeler Expedition), the one which Rothrock took to the Gray Herbarium for Gray and Watson to work on; it is the first set of the Wheeler Exped. plants. At Greenman's instance the Field Museum purchased this herbarium and with it came some Rothrock letters. Rothrock, in fact then, had a personal herbarium while he was professor of botany at the Univ. of Pennsylvania. Greenman also says that J.M. Coulter had an herbarium of 80,000 plants while at the Univ. of Chicago. It was not used except occasionally for reference or comparison. Coulter at last deposited it in the Field Museum for a period of twenty years on the condition that, (1) he could at his option withdraw it in the interval, (2) his graduate students could use it (and the Field Museum) equally), (3) and that Greenman should be put in charge of graduate students.

– Cont. from * p. 92 ante. In Feb. 1936, McMillan announced publication vol. 1. of Fritsch, Structure and Reproduction of the Algae.

— Dr. B. Syngé, Professor of Botany, Farmaseutisk Institutt, Blindern, Oslo, asks me for literature on Sequoia, its references to the discovery, history, past and present.

— Prof. Dr. W. Y. Chun, Botanical Institute, Sun Yat Sen University, Canton, China, asks me for seed of Castanopsis chrysophylla. I told him that seed of this species had always been very difficult to collect; the trees relatively few, and the squirrels always very alert and very early. But that I would send, if possible.*

— Mattfeld, Prof. Dr. Joh., Botanisches Museum, Berlin-Dahlem, is a most likeable chap. He is the translator for German in the Taxonomy Section. One of his responsibilities in the Herbarium at Berlin is Compositae.

— Dr. Ludwig Diels and Dr. H. Harms, Berlin, are both here. I have had little chats several times with both

* Sent a lot of seed in Jan. 1936 circa.

of them.

— Dr. Neil Stevens, U. S. Bureau of Plant Industry, Washington, presents himself. So does Dr. W. H. Loehwing, Dept: Bot., Univ. of Iowa. Both, in addition to speaking of my work, instanced some personal link which I have forgotten.

— My old friend Dr. Hugo Glück, Professor of Botany in the University of Heidelberg, is here. He wants material of Pilularia americana, Sagittaria sanfordii and S. greggii. I told him that possibly the stations for the two latter have been destroyed. He also wants Marsilea oligospora.

— I heard A. D. Batton's paper on the arborescent Senecios of central Africa and the curious ways in which the species are locally isolated described. It was a suggestive paper and quite clean cut. Plants that have few

growing points and leaves in rosettes he calls megaphylés, such as palms, yuccas, these Senecios.

— F.M. Greenman spoke about a man named S. W. Geiser, (professor of biology, Southern Methodist College in Texas, who is writing biographical articles on the early German collectors in Texas.

— Dr. J.B. Davy, Oxford University, invited Dr. H. J. Lam, University of Leiden, and myself to dinner at the Amstel Hotel on Friday evening. We had much good talk, and many stories were told. Davy told a story of his botanizing below Tehachapi towards the desert. He was offered a ride on a hay wagon by a ranch hand who was half drunk. After Davy got on the wagon, he put the lines in Davy's hands and said: "You drive"; — lay down on the hay and went fast asleep. Davy had never driven a

team of horses in his life but he tried to do his duty. However, in crossing the railroad track the wagon struck and there he was with a train soon due. By aid of a passer-by, he succeeded in getting across in time.

— Prof. John N. Couch, Department of Botany, University of North Carolina, introduces himself and gives me the good news that Jos. E. Adams, my Ph.D. student of last year, has been appointed to their Department at Chapel Hill. I assured him that Adams was a fine student and good teacher and that it is my belief that they will find their choice an extremely fortunate one.

— At this Congress and that in 1930 I made note of the high plane of science on which all the botanists of whatever race or color met — high above all nationalism or localism — for science has no boundaries. — A pregnant sentence or two on this aspect is found in Science's Magna Charta (Science, 1-7-'38, p. 17.)

I return to England and Kew from the Congress in Holland — a week of great profit and delight. cf. p. 109 ante.

Dr. J.B. Hutchinson says that he is making a new genera plantarum, bringing Bentham and Hooker up to date. It is to be printed in English!!

Bullock, the Assistant in the Herbarium, tells A.A. me that a Sequoia gigantea tree in the chalk hills of Lincolnshire, in a sheltered situation, has attained a height of 200 feet with a trunk 8 feet in diameter. My opinion is that these figures should await confirmation.

— N.Y. Sandwith has just returned from a collecting trip to Albania.

— E.P. Killip, whom I met at Amsterdam, has come to Kew for a few days work. He is of the staff of the U.S. National Herbarium, working on the flora of Columbia. He overtook me one day at lunch time in front of the tea houses by Kew Green, asking if I were going to the Star and Garter. So we went to that hostel and had lunch together. We had certain views in common, we found, and thus we established quickly a friendly understanding. He complained properly that it was most unpleasant to be annoyed by the practices of Roland Harper, Georgia, who sends duplicate specimens of the same collection independently to two different botanical centers: the National Herbarium and the New York Botanical Garden, and then complains that the determinations are not the same. I pointed out first: that botanists are always

overloaded and that no one has any right to ask two separate botanists to do the same work; second, that in our present state of knowledge there are found to be differences in view as to the validity of species or as to the identity of a species. In all past time, even two botanists who are of one school, do not agree absolutely. Any person who wants another person to perform the great labor of making determinations should select some one as an authority and abide by him.

Often the motive is merely unworthy; to show that botanists do not agree or that they make mistakes. The device smacks too much of the layman's delight in the fallibility of science.

Killip said that Dr. Maxon was very patient under this, but that he was (Primarily) and felt that he had succeeded in ending it – this particular case.

I called Killip's attention to the "fading out"* of Dr. N. L. Britton at the New York Botanical Garden, that his name is no longer honored there apparently. Killip said that Gleason had been brought to the New York Botanical Garden as Vice-Director with the plan that he should succeed Britton. He and Britton quarreled. Gleason built a house, not near the Garden where Britton desired to establish a colony of botanists, but at some distant point. So Gleason hates Britton; wherefore, the citing of Gray's Manual in Gleason's Flora and the complete omission of Britton's Manual. Killip referred to the indecent haste with which many

* cf. p. 20 – 23, ante.

persons were throwing overboard the American Code.

Killip says Ivar Tidestrom has a position at the Catholic University of America, now that he has been retired from the U.S. Bureau of Plant Industry. He gets $1000 or so a year and has also his pension from the government. Also a pension as a Spanish war veteran, too, I think. He has married a French girl who is a Catholic. I asked Killip if Tidestrom were a Catholic. Killip said he was, perhaps, in the way of becoming one.

Tidestrom is writing a flora of Arizona. T. H. Kearney is retired or nearly ready to retire and wishes to go back to his first love, taxonomy, Killip says. He will help Tidestrom on the Flora of Arizona.

Killip referred to three persons writing a Flora of Arizona. By the third he meant J. J. Thornber, but I questioned whether Thornber could be doing much. He has been in Arizona a life time and if he were really at the botany of Arizona he would have been publishing series of papers all these years – critical revisions in preparation for a flora.

Killip thinks highly of my old pupil Conrad V. Morton.

A. S. Hitchcock will be retired before very long. Killip speaks highly of Jason Swallen, the grass man.

I understood Killip to say the retirement age in the Bureau of Plant Industry is 68.

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In a blind street off Sandycombe Road, somewhat of a slum quarter, a group of small boys are playing cricket as I come along. They have no bats, no ball, no wickets, but they have a piece of board that they are using for a bat, a piece of stick three inches long in place of a ball, and they manage without wickets. The game is highly exciting and the talk and calling cries are highly vocal — but I do not understand even one word they (these lads) say. However, they are having a perfectly capital time, and I go on. Before long I am passing over Kew Green. Another group of small boys are playing; they have bats, balls, wickets. They have their school crests on their dark blue coats and embroidered medallions on their caps. They are little aristocrats. They have a

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lively talk, too, but neither do I understand a word here! Not one. But I think little of this fact. Last spring when waiting for the hour of my graduate seminar in the University of California I noticed that the conversation going amongst the students was not intelligible to me. Occasional words I caught, but not the subject of the talk. After the seminar began, their enunciation, while reading a paper was sufficiently distinct. The moment the students leave a class room, then they shake off the academic atmosphere and revert to the social stratum whence they came. Their speech is a mumble very difficult to follow. In the case of the school boys in Kew, both groups represented different degrees or kinds of cockney. Very commonly I cannot fully understand the English people I meet and must ask them to repeat. In

some cases, even with several repetitious I cannot understand at all! And yet, even with these extreme cases, they never once fail to understand me!! I do not myself recall ever having been asked to repeat a sentence! during the three months I have been in England.

— Two days before leaving Kew for Southampton I went into London to finish up stray errands. [Here belongs p. 110 ante, which is out of order.] One of my errands was to the Natural History Museum to learn if the original specimen of Isopogon inconspicua Sm. (Gilia inconspicua Dougl.) were preserved there. Taylor made an attempt to find it for me but failed. They appear not to have it. After this was done I called on Dr. J. Rams-

bottom, head of the Department of Botany in the Natural History Museum. We had a bit of talk about nomenclature at the International Botanical Congress (Amsterdam). I expressed my dissatisfaction with various measures. So did Ramsbottom. He said that he felt, now that the main problems in nomenclature had been disposed of, the matter of nomenclature was in the way of getting into the hands of specialists who were not working in botany really and who would develop huge refinements of a legalistic kind and numberless rules hard to understand. I pointed out that the older generation of botanists — Robert Brown, Bentham, Hooker — had no difficulty in expressing themselves clearly as to binomials and as to synonymy. We had a pleasant talk and in a few mom-

nuts I left, after inviting him to California and promising an excursion to see Sequoia.

I have, by the way, said this to most botanists when saying good-bye. Perhaps it will encourage some of them to come to California.

Few purchases have I made in England. The shops are more expensive than at home. Restaurants are far more expensive. Yet foods in the markets often are very cheap. I saw fine large roasting chickens in the markets at Richmond for 10d. and 1/2 2d. In Berkeley such fowl would be four to five times as much.

The next day, Friday, Sept. 20, is spent in packing up. I saw my parcels of plants, a box and a manila-paper wrapped parcel, go off to Richmond, car-

ried by Bartle, the porter, in his uniform of the Royal Gardens, yesterday. Today I am saying goodbye in the Herbarium. About three o'clock my luggage is picked up at 15 Clarence Road by a railway van and taken to Kew Bridge station. Next morning, Sept. 21, my landlady, Mrs. E. M. Campbell, serves my breakfast at 6:10 and by 6:30 I am off to the station where my luggage is waiting for me. There is no charge for keeping it over night and I label it to Waterloo. I am early at Waterloo. I pay the porter to put the luggage on the boat train for Southampton. It is now 7:30. I decide to go by the 8:10 (tourist) train instead of waiting for the 9:00 (cabin) train on which I have a reserved seat. The run to Southampton is made in less than two hours and after my passport is examined I

will be soon on board the Georgic.

On the dock I join the long lines of passengers waiting to have my steamer ticket examined. When my turn comes I hand in my broad green sheet almost mechanically, receive a part of it back and pass along towards the gangway. There is another official ahead of me and at the sight of him, though so short a time have I been away from the United States, my heart stirs a bit and I smile. He smiles genially in return and I hand him my passport. He is the American Consul of Southampton.

Except for one day the passage is very smooth. I busy myself most of the time – writing up Amsterdam and England in my journal, collating my notes

on Eriogonum done at Kew. I have a large comfortable cabin all to myself which is a great help.

This afternoon, Sept. 28, a land-bird, looking like an English Sparrow, is seeking shelter on the ship. A passenger tells me there were two or three different species of small land birds sought the ship early this morning when we were off Nantucket Light. Still it is a long way from land for such small birds.

We arrive in New York Harbor about 1:00 in the morning and lie quiet. About 7 o'clock the immigration officers come aboard, and after showing our passports the Georgic moves up to the dock, and then begins the long wait for assembling of our luggage. After my 3 pieces of luggage are brought together, then I notify the Customs Booth, and an inspector

is detailed for me. I open the two suit cases, but meanwhile the inspector has noticed my address. Then he says: "Oh, you are from the University of California", passes everything without looking at its contents, refuses to have the third parcel opened, and pastes the release stickers on all I have. Then the luggage goes to the Pennsylvania R.R. desk on the dock and is at once checked to Berkeley. Thence I go by taxi to the Pennsylvania Station at 34th St.

The countryside is now very good looking and I enjoy the ride from New York to Lancaster. We pass along the Susquehannah River and I am surprised at its width (1/4 mile apparently) and its shallowness.

Between Chicago and Cedar Rapids the countryside is interesting. The farms are remarkably well-kept, have fine up-to-date painted barns and so on, and the vegetation is everywhere rank.

From Laramie on I get a better view than I have ever had before of the "Laramie Plains", a plateau which looks nearly flat when viewed from some little elevation, although it is rolling or somewhat uneven. Its great extent, its remarkable elevation, 6000 to 9000 feet or more, the mountain ranges lying in relief around its rim — all combine to give the region a special interest. In eastern Nevada I note lines of Lombardy poplars partly killed — and I wonder if this happened in the great frost of December, 1932.

No. 17, 397. Bassia

Imlay, Nevada. Oct. 2, '35.

Berkeley, Oct. 3, 1935.

I arrive in Berkeley at 9:00 am o'clock and proceed to my home on Masonwood Road, — my holiday in Europe ended.

Berkeley, Oct. 10, 1935.

At the Club this luncheon time a discussion arose over trees — especially those of the Cypress family and related trees. Dr. David Barrows speaks of the Santa Lucia Cypress and asks if it has been transplanted into people's dooryards in that coastal region as at Guadalupe, an old Spanish settlement below San Luis Obispo where are some large old trees by the ancient adobe houses. Barrows, as to a particular station in the Santa Lucias, refers to a place in the hills westerly or north-

westerly from Santa Margarita — which is, I take it, the station described to me by a San Luis Obispo correspondent. We talked too of the various true cedars and Barrows had a lot to say about his trip into Morocco — and the Atlas Cedar, Cedrus atlantica. Also he described a recently excavated Roman city — an outpost of the Empire of Rome in Morocco, — because the Roman legions never conquered the Moors. We discussed, too, the Big Trees, Sequoia gigantea: as to the age at which it begins to seed (about 250 years); its chances in the northern Sierra Nevada forest in competition with the aggressive Abies concolor and Pinus ponderosa under increased rainfall. Professor C. D. Shantz (Astronomy) took an interested

and well-grounded part in their discussion. Barrows has noted the magnificent forest of Pinus ponderosa, Pinus lambertiana and Abies concolor that surrounds & is associated with the Big Tree on the rich plateau or extensive flats where the Calaveras South Grove grows and wished to know if there were anything finer in the Sierra Nevada in the way of a fine forest. In his mind he associated the development of the South Grove in this deep rich soil with the magnificent forest stand of pines and firs. But I pointed out that the greatest development of Big Tree forest occurs on the granite plateau of the Giant Forest above the Marble Fork Kaweah River. We debated, too, the effects of micro-climatic areas in limiting the range of species. Barrows once more referred to the splendid Platanus racemosa on the Arroyo Grande, which he saw again this year. Also he swears by a huge Sugar Pine on the border of Frenchman's Mdw., Darrington, Calaveras Co.

— Roy E. Dettling, of Stanford, called today. He wished to see my Dentarias. He is preparing a revision of Dentaria and Cardamine. I find him a pleasant modest young fellow that I like to oblige. I took him to luncheon at the Club. — Nov. 15, 1935.

cf. ante 54; 94.

Berkeley. Nov. 1935.

— Heavy north gale today, Nov. 27, bringing down branchlets of trees, It must be a very high wind in the Great Valley. At this time it does not do much damage, since the country was already dry. Sometimes in very very wet winters, a heavy north gale will arise after a very wet spell and trees come down in consequence. Mrs. Virginia Bailey remarks that in the upper Sacramento Valley Blue Oaks (Quercus douglasii) may be overthrown in the hills.

— Kept dry, (see above), with only slight and local showers for between, no real wetting. Saturday night, Dec. 28, 1935, first real wetting of season.

Berkeley, Jan. 1936

— Dr. F. M. Anderson called today. He said: The Klamath Mountains have been continuously uncovered since the Cretaceous — 200 million years. There is a strip of Cretaceous sediments in the Sacramento Valley, a narrow strip one hundred miles long, derived from the Klamath Mountains. There is Redwood in the Jurassic in the Klamath Mountains. The later formations are all around the Klamath Mountains but none of them in it. This is the first time that sediments have been traced to their source. — [Being much disturbed by a multitude of things this morning, the preceding note may be inaccurate in one or two details, but is correct as to the main burden of his remarks. — W.L.J. — Jan. 21, 1936.]

Went to St. Helena Sanitarium on Wed. Feb. 5. Today, Saturday I walk towards Angwin's and cut across the hair-pin turn of the wagon road by a trail. At the summit of the first little hill, I notice an "open" that has been under my eye before - an opening in the chaparral or perhaps rather chamise, since Adenostoma fasciculatum is here the dominant. On account of the shape of the opening I conclude that it is a man-made "clearing".* The native plants are coming back - the woody ones in the following order of abundance: Lotus scoparius; Eriodictyon californicum; Arctostaphylos manzanita. There was only a little Adenostoma fasciculatum — the climax. I also notice a few small olive bushes, which is conclusive

* Cont. p. 143 at bottom.

evidence of the clearing; remains of planted rows.

No. 17,398. Hypericum

Adam and Eve Ridge; in the "opening" noted on p. 142.

No. 17,399. Garrya

♂ fls. near Four Corners, Adam and Eve Ridge.

— The first day I was here, Feb. 5, I noticed Ceanothus californica with bursting winter buds and the leaves half-grown in size!

No. 17,400. Garrya

♀ Adam and Eve ridge, rocky west slopes.

* Cont. from p. 142.

The slope is such, too, that it should be covered with Adenostoma fasciculatum, the adjacent slope bearing it is as a dominant. It might have been a "bald" or "prairie" but why then should the native plants be taking possession?

The Arctostaphyli are in flower. The shrubs of Arctostaphylos manzanita are in glory. They form on the hillslope a remarkable display. There is a shrub, there, rounded and well-formed, the entire crown adorned regularly and rather closely with the uniform roundish clusters of flowers — the clusters drooping, so that all the corollas are inverted. Every blossom is being visited by bees which have to hang on from below — and not at the first try do they always secure a firm foothold. Mixed in here and there with the abundant A. manzanita are occasional shrubs of A. stanfordiana with pink flowers. These shrubs are also very beautiful and as abundantly floriferous,

and perhaps even more delicately engaging. on account of the fresh pink color. (Cont. p. 146).

It begins to rain on Feb. 9 and develops soon into a heavy storm — but the beginning and the storm itself was without wind — so that I did not expect so much from it. It is, however, a major weather disturbance.

I return to Berkeley on Feb. 11 in the rain and since then heavy rains, like those of the old-fashioned years, continue day after day — and there is no stopping up to today, Feb. 23. Last night it rained all night. Feb. 24, I drive in the afternoon back to St. Helena and it pours heavily all the way up — a regular cloudburst between Union sta. and Yountville.

Howell mt., Napa Co.

The shrubs of Arctostaphylos manzanita, flowering so abundantly two weeks ago, are now quite naked of flowers — save only an occasional shrub here and there. Arctostaphylos stanfordiana, which was also flowering abundantly two weeks ago, is still in flower, about as showy as in the beginning. The flower clusters of A. manzanita are cymosely branched; the primary branches (1 to 3) of A. stanfordiana are simple and racemose. I note these differences along the upper portion of brook below Four Corners. I go on up to Four Corners, turn off the road and climb by the trail to the summit of Adam-and-Eve-Ridge. In the swale just before reaching the summit, there is a fine

colony of A. stanfordiana.

Below Four Corners, on the northwesterly slopes of Adam-and-Eve Ridge, the amount of Umbellularia californica in the chaparral is very considerable, forming over fifty acres, 25 o/o of the stand. On the opposite, across Blackman brook, there is a broad unbroken or little-broken slope facing southwest. The terrain is rocky and it is not an area where, antecedently, one would expect Umbellularia californica. Yet it makes a very striking part of the cover and forms 20 o/o of the ↑ chaparral stand. The individuals are 8 to 16 ft. h., sometimes 20.

No. 17,401.

Lichen on oaks,

Pratt Valley.

A nurse in the Sanitarium says that, as a lad, he lived in the Eel River valley between Scotia and the South Fork. He spoke of the Pepperwood (Umbellularia californica) groves that were a feature along the river in early day. Some of the groves were cut down just to clear the land for farming - the logs being burned. He said that he saw logs that would mill timbers four feet square of the Pepperwood.

The 1906 earthquake was severe in the Eel River valley. The great groves of Redwood were then still in existence mainly. On the morning of the great shock he heard the great roar, — a mighty ominous roar in the Redwoods - the great trees swaying in such wise that the the branches

interlocked in the very dense stands. He also stated that when a heavy gale comes in from the ocean, it could be heard in his day in the groves down the river, a distinctive roar, a half-hour before the gale reached his own home.

— Arbutus menziesii. Seedlings begin to develop tuberous expansions, globose in form, very early. One young tree has a "tuber" at ground 10 inches in diameter, the trunk above it at 2 ft. above the ground being 5 in. diameter. Adam's Peak Ridge.

— Aesculus californica. Its buds were bursting into leaf on Feb. 6 near the Sanitarium.

— Within four or five days I saw in the daily newspaper (Examiner? or Chronicle) a story to this effect: Some well-known persons charges $100.00 for a lecture; $200.00 if he is to be entertained afterward.

[Berkeley, Jan. 1936]

No. 17,402. Salix lasiandra Benth.

These are leafy twigs taken Jan. 20, 1936, from the very fine tall tree rising out of the bed of Strawberry Creek at the Sather Gate bridge. The tree was cut down about five days ago by a small crew of workers enrolled under one of the Federal "made work" for unemployment agencies. The stump was not dug up. The trunk was removed level with the ground, but will crown-sprout. It is a shame that a fine tree should be sacrificed in this way.

Hourle Mt., Feb. 27, 1936

— Arctostaphylos stanfordiana 4 racemose branches to a panicle (1 to)

A. manzanita = a panicle with the central axis terminating in a raceme and bearing laterally racemose branches.

— Adam-and-Eve Ridge clearly shows, as on northeast slope near Four Corners, that its present condition is due to, is the end result of repeated fire ravage. The Madrones are small and appear as stump-sprouts forming considerable circles. There is a very great deal of small Umbellularia californica. There is a little Pseudotsuga taxifolia and Pinus ponderosa. Unquestionably these slopes were once woodland. On the northwest side of Adam-and-Eve ridge, the California Laurel scrub forms 15 % of the woody stand; on the southwest slope of the area joining it north it forms

13 % of the corr.

— Arctostaphylos manzanita, in flower at time of my first visit on Feb. 8, very abundantly. Now, on Feb. 27, there is scarcely a bush with flowers. On the contrary A. stanfordiana was in full on Feb. 8, is still in full flower. The differences between the two species are augmented by these two facts: time of flowering, and structure of inflorescence (see p. 151 ante).

— Arbutus menziesii. I stop to study a circle of young trees about 8 feet in diameter. There is little doubt that this species is immortal; that after each destruction by fire or old age it regenerates and goes on. Hiking down the rocky terrain of the west

slope of Adam-and-Eve I came to a stop — held fast — for there a fine cluster of stems burnished to red-tan and foiled by the masses of dark foliage rose high above the mass of chaparral aglow with the sunlight, an inspiring benediction of beauty and fulfilled desire. I raised my hand high to the blue above in acknowledgment of the blessing.

— Pickeringia montana. A little scattered widely over the rocky terrain of Adam-and-Eve, much of it dying. It would seem to be passing out.

— Lotus scoparius, leafy by Feb. 27.

— By Feb. 9, I was much struck by the amount of Brassica campestris in flower in the orchards of Napa Valley, especially about St. Helena, broad sheets of color running across the valley level under the orchard trees, the crowns of the

Napa Valley, Feb. 27, 1936.

trees in winter nakedness etched in a black patter of liner above this glittering yellow sheet.

Solano Co., plains, Mar. 15, 1936.

– I asked Robert McCrory, farmer, who was born on the place described on p. 156 seq., what over there Sacramento Valley plains had in the way of grass in early day. He said it was wild oats. I asked if there were any bunch grass or perennial grass. He said there was a little bunch grass over on the Muzzy "ridge", the rise where the new Peters barn now stands. This note belongs on, refers to p. 156.

Solano Co., plains, Mar. 15, '36.

drove to-day (Sunday) along the road which runs east, the first east-west road south of Vanden station. The slight rises on the rolling plain show vestiges of the primitive flora. There is a colony of Lomatium utriculatum about 1 1/2 miles e. of the corner turn forward Vanden. The vernal pools still have a primitive vegetation likewise.

No. 17,403. Callitriche marginata Torr. Vanden (s. of). Truly aquatic, the terminal rosettes of the stems floating on the water of the pools. As the pools evaporate, the Callitriche plants collapsed lie along the ground or rather wet mud of the pools. It is gregarious and tends, where well developed, to make a marked display on the water.

No. 17,404.

to C. In nearly all the pools there is

Vanden, S. and SE. of, 2 miles, Mar. 15.

much filamentous algae forming heavy masses. As the pools dry these abundant algae form dried sheets on the bottom and sides of the pools which are conspicuous for a long time. Vanden (S. of).

No. 17,405. Ionatium utriculatum

See p. 155 at top

Vanden (SE. of).

Robert McCrary, farmer, says his horses were poisoned by eating this in the pasture east of his house*, a pasture which has never been plowed. The animals were quite "stiff", could not be worked. A veterinarian was called who administered treatment. The veterinarian attributed poisoning to the pollen, the plants being in flower. The animals recovered.

* McCrary ranch is east of Cannon sta., its east border bounded by the Elmira-Denverton road.

Denverton-Elmira road, opp. McCrary ranch, 3 mi. S. of Elmira*, Mar. 15, 1936.

No. 17,406. Brodiaea (In notes & Misc.)

With 17,407, Seedlings. Notice the "sinkers".

No. 17,407. Callitriche marginata Torr.

This forms tiny mats, hugging the ground closely in the depressions in the "hog-wallows". It is impossible to lift such a mat, since it is rooted so closely to the ground. One must lift out a chunk of dirt with it.

No. 17,408. Myosurus

In depressions, former rain pools, in the "hog wallows".

No. 17,409. Lupinus

With 17,407. Seedlings.

* All of the above, nos. 17,406 to 17,407, were collected in the muzzy field east of the road.

Vanden, Solano Co

Aspects of the Vallejo Hills from the east-and-west road (see p. 155 ante) are different from what I usually see, coming and going to Little Oak by way of Vanden. The long high crest of the hills from the rounded summit of Vermont Hill to the rounded summit of Pigeon Point is almost wholly bare as are the hills generally — so noble and so bare. The Winchell Gulch has almost no trees; Reddick Cañon, a cluster of buckeye* in a hollow at the head; next cañon almost none on the north (south-facing) slope; Chandler Cañon, north wall, very heavy growth. — I spot crocus on the Denverton-Elmira road opposite McCrory ranch; also in the fields south of Vanden.

* Aesculus californica Spach.

Mar. 15, 1936.

No. 17,410. Dichelostemma multiflorum (Benth.) Heller ~~Brodiaea capitata~~

Plants dwarfed in this year. On rocky slope of the Basalt-Hill at Thomasson near Cordelia. Two plants with heads reduced to a single flower.

— The rainfall for the season has been thus far largely concentrated in February. The season as to vegetation is early, — early leafage (cf. p. 149 ante) and flowering. The wild oats (Avena fatua) are headed out. Stockmen here in Solano Co. say the feed will be short. The indications are for an early dry season with little native flowering.

No. 17,411. Poa annua L.

This grass grew in the "hog-wallows" with 17,407. Starved plants in this year of deficient rainfall.

Little Oak, Vacaville, Mar. 15, '36.

-Vaca Mountains. Today I contemplate the long line of their unbroken north and south ridged summit. How many things I think of. The great age of the foothills. The Araqupa Hills have a curious interest, with their woodland of Quercus douglasii, Quercus lobata, Quercus wislizenii and Aesculus californica. Which ones last longest ranging south? I cannot recall at the moment if Quercus Kelloggii be in the hills.

But what a lot of things are not here or barely touch the region like Cornus glabrata in Wild Horse Cañon, Vaca Mts. Or like Cercis occidentalis that come into the lower cañons and omit the Araqupa Hills altogether.

Berkeley, March 24, 1936

- Professor G. N. Jones, University of Washington, Seattle, formerly at Washington State College at Pullman came into call a little after three o'clock this afternoon. He drove down, coming through the Willamette Valley, stopping at Eugene (Oregon State University) where he saw L. F. Henderson who has prepared a flora of Lane County (ms), at Corvallis where is the State College of Oregon. He said, I think, that he did not stop at Salem (being off his road four or five miles), Willamette University, where Morton E. Peck is Professor of Botany. He had, however, seen Peck not so long ago. Peck is working on a Flora of Oregon and told Jones that he had gotten as far as the letter "V". Jones' inquiry revealed that Peck was doing the genera

alphabetically, and therefore was nearly finished. This statement, as to the alphabetical generic method of work astonished me not a little and I should have from incredulous saw that the fact of it was voluntarily stated by Peck. Jones said that he came through the Redwood forests along the coast in California. He says that the Spruce forests (Picea sitchensis) of the Oregon coast are as large trees as to size of trunks but are not as impressive. The fluted bark or furrowed bark is the quality that gives the Redwood dignity and impressive force; whereas Spruce trunks are, as Jones expressed it, like elephant's legs. There is, as I pointed out, a quality about the Redwood that sets it apart from all other

trees. It is curious, I continued, that all the early scientific expeditions fail to mention it, save only Douglas who gives it a few lines. Menzies says nothing about it at all, although recording every wind that blows, every fog bank that shows up about the course of the ship. Pres[illegible] says nothing of it for Haenke, who was its first collector. Chamisso and Eschscholtz do not record it, nor Hinds of the Sulphur Expedition, nor Lay and Collie of Beechey's Voyage. Thos. Nuttall did not see it; but all or nearly all the others saw it. My explanation is that the tree is so overpowering, so overwhelming, so out of all experience and usage and habit, that they deferred attempting to put down anything or felt helpless to do it. Chamisso and Eschscholtz discovered

a new Rhamnus at San Francisco. They had had experience of Rhamnus. They knew Rhamnus frangula of Europe and other species. They had no difficulty – it was easy for them – to recognize and describe Rhamnus californica as new.

Jones proved an interesting man with a wide range of experience in Botanical matters in many ways and our talk ran on a long time. When it came six o'clock I asked him to dinner. Mrs. Jones was waiting outside and I took them to the Faculty Club where the dinner was very good and I hoped satisfied hungry travelers. I did not realize at first that Jones had come all the distance from Washington in order especially to see me. He continued to ask

questions and time ran on as each topic of conversation developed good talk about so many things. He is, in reality, much isolated at Seattle. There are few botanists there and opportunity such as this seldom comes to him I suppose. He is specializing on the Olympic Peninsula, covering it historically, systematically, ecologically. He has a critical mind and uses Clements for example only in so far as Clements is sound or is applicable to his plan of attack on the flora. His wife is an attractive little woman. She is very fair; he dark with a very heavy thick crown of dark hair. They left about 11:00 o'clock that evening, being shortly due in Seattle at end of their spring vacation. (See further as to their visit in "Men and Manners", vol. 10, p. 16-18.)

Knoxville, nr. Napa Co.

Today, Sunday, I drove early to Vaca Valley; called for my old-time friend and neighbor, Neal Pate, and went on to Winters where we found Lawrence Wilson. In Mr. Wilson's machine we drove west through Putah Pass into Berryessa Valley, north through the cañon to Zem-Zem and on to Knoxville. All the country very dry.

No. 17,412. Limnanthes

Berryessa Valley, s. of Monticella c. 2 miles. Low fields.

No. 17,413. Rhus trilobata Nutt.

Valley edges along the bases of the hills in the narrow valleys or flats near Zem-Zem.

No. 17,414. Galium

Four ft. h. over bushes. Zem-Zem. Woody stems.

No. 17,415. Layia chrysanthemoides (DC.) Gray

Knoxville, s. of.

No. 17,416. Fritillaria

In blue adobe, on gentle hill slope, s. of Knoxville.

No. 17,416a. Athysanus pusillus Greene.

Knoxville.

— On the old-time baronial Abraham Clark ranch in Berryessa Valley the splendid Valley Oaks are being destroyed. The trees are "falled" and where they lie are burned, to rid the land of them. It is a sad spectacle.

— Notes of the road: Markley Cañon is the cañon between Rag Cañon and the main Vaca Ridge. Thompson Cañon is north of Putah Pass, opposite Wild Horse Cañon on the Solano Co. side. Cat Cañon is next

Putah Pass, Apr. 5, 1936.

Wild-Horse Cañon, but whether east or west I now forget (Mr. Wilson is the informant and I did not put it down at the moment). In Putah Pass on the Yolo Side, on a rocky outcrop near the roadway, is a stand of Ailanthus glandulosus, spontaneous tree weed. Mr. Wilson calls it China Locust. So, Californians invent names for the introduced plants as well as the native ones. I remarked that it was ordinarily called Pride of China. Neal Tate said it should be called Devil of California. The last rise into Berryessa Valley is called Gasling Grade. The settlement just within the cañon north of Berryessa Valley is Bolicaville. The creek in the cañon is Equirra Creek. Rhamnus Tomentella, 10 mi. S. of Knoxville. Arctostaphylos manzanita near same locality. [Cont. p. 179 at *]

Mt. St. Helena, Apr. 19, 1936
east side.

What a wealth of vegetation on the east side of the Napa Range where one crosses over the shoulder of Mt. St. Helena and goes down into the cañons: Acer macrophyllum; Libocedrus decurrens; Pinus ponderosa; Rhododendron occidentale (abundant); Ceanothus Parryi; Pasania densiflora; Pseudotsuga taxifolia and many more. Not one of these is in the neighboring Vaca Mts. eastward - save only the first and it most scantily represented in individuals. The roadway is in the bottom of the cañon with prosperous vegetation on either hand, but a short distance up the sides of the canon is chaparral; badly fire-scarred slopes which once had forest cover. The creek in the cañon is St. Helena Creek.

Coyote → Valley, s. Lake Co. See p. 185.

April 19, 1936

No. 17,417. Linanthus bicolor Nutt. Scattered all over the grassy flat in rather depauperate plants; three spms. found on a tiny "burn". See below.

No. 17,418. Pectocarya penicillata A.DC. Dry flat.

No. 17,419. Festuca pacifica Piper (det. Beecher Crampton, 7/36) This grass grew in moister swales on the dry flat.

No. 17,420. Trifolium microdon H. & A. Dry flat.

No. 17,421. Ceanothus parryi Trel. Dry flat.

— The vegetation is scrawny. I collect annual just the same as usual, because vegetation representative of dry years is valuable. [Collectors tend to take only fine spms.] I collect nos. 17,417 to 17,421 on a little flat 5 miles or so from Middletown. On the flat, a somewhat extensive one, there is a tiny burn (about 8 feet square). On this burn Linanthus bicolor (Nutt.) no. 17,417, grew far more luxuriantly than on the grassy areas hard by. Burns are selective the first year and I believe the ordinary grasses do not take to them the first season — at least not the introduced ones — the alien bromes and such. Montia perfoliata was there and also Eschscholtzia californica which latter thrives under fire. Hosackia, Erodium cicutarium was on the burn.

Middletown is situated in Callayomi Valley. But see below.

— The Putah Creek bridge is in Coyote Valley. As one comes north out of Butts Canyon into an open valley, this valley is Coyote Valley.* All this according to various Lake County authorities and my own field records. Middletown is in Coyote Valley! Callayomi Valley is not clear or definite as a name. Cont. p. 177.

* See p. 187.

Coyote Valley, s. Lake Co. See

I travel on from the spot noted on p. 171 ante and within two miles of Middletown I stop again. Here on the right hand side of the road near a farm house there is a field with a gully running through it near the road. On the flat is a broad purple field of color and I stop to examine and collect. It is Trifolium dichotomum H. & A. More of it than I have ever seen before in one spot and fairly well developed in spite of the dry year. The heads are noticeably cylindric and quite narrow, more so than when dried under pressure.

No. 17,422. Trifolium dichotomum H. & A. Dry flat.

No. 17,423. Wyethia helenioides (DC.) Nutt. Rays yellow. Dry flat. Leaves always snowy white in the sun, great.

April 19, 1936

No. 17,424. Trifolium ciliolatum Benth. Fls. pinkish. Dry flat

This and the two following are all from one spot — within 15 yards of each other.

No. 17,425. Trifolium bifidum Gray with no. 17,424.

Peduncles a little hairy.

No. 17,426. Trifolium ciliolatum Benth. With no. 17,424.

Peduncles glabrous.

— I drive on to Middletown, turn north on the Lakeport Road and in about 1¼ miles stop to collect in low ground of the valley floor, Callayomi Valley. On the west side of the road is a large area of low ground in which there is dominant:

No. 17,427. Eryngium sp. - diseased! Insect damaged Low muddy ground. See above. Callayomi Valley

No. 17,428. Pleuropogon californicus (Nees) Benth. ex Jaeg. This grass grew in the mud with no. 17,427.

Callayomi Valley, s. Lake Co. (See note on p. 186)

No. 17,429. Lilaea subulata
with 17,427.

No. 17,430. Ranunculus occidentalis Nutt.
With 17,427

No. 17,431. Oenothera ovata Nutt.
Above mud flat in same field as 17,427.

No. 17,431a. Callitriche marginata Torr.
Level but
In mud, with 17,427.

No. 17,431b. Sagina
In mud with 17,438.

From the field noted on p. 173, I drive on towards Adams Springs about 2½ miles, to a point where the canon begins at its lower front. Here by the side of the road, near a concrete-walled canal, I stop and eat luncheon. This point is about 3 miles from Middletown. Here I collect:

No. 17,432. Sanicula bipinnatifida H. & A. wooded flat.

No. 17,433. Baeria
Open hillslope

April 19, 1936.

No. 17,434. Calochortus amabilis Purdy
on wooded flat.

No. 17,435. Lotus nivranthus.
This grew on the openly wooded flat with no. 17,432. It also grew at each of the stations noted on pp. 170, 172, 173, — at all of them it was very dwarf — but probably more abundant in individuals than any other species.

The following, 17,436-9, in the low somewhat swampy ground noted sub 17,427.

No. 17,436. Poa annua L.
[det. B. Crampton, July 1933]
This grass grew in the mud with 17,427.

No. 17,437. Barbarea vulgaris R. Br.

No. 17,438. Juncus
In mud, with 17,427, forming tufts. In removing the mud in lab. the plants have all been separated but they formed five tufts on the ground.

No. 17,439. Nemophila pedunculata Dougl. Flowers (corolla) dull white, a purple spot on tip of each lobe.

Callayomi Valley, s. Lake Co. See note on p. 185. April 19, 1936.

At the station described on p. 173, the low valley somewhat swamp-like places with higher (* see p. 177) valley floor surrounding it, I collected also the following:

No. 17,440. Achyrachaena mollis

The smallest plants are so small with such narrow heads that at first I did not recognize the species! so dwarfed! In the field with 17,431.

No. 17,441. Limnanthes

Cor. white, moist spots.

No. 17,442. Ranunculus occidentalis Nutt.

In field with 17,431.

No. 17,443. Orthocarpus faucibarbatus Gray.

Flowers yellow. Low ground.

No. 17,443a. Lasthenia glaberrima DC.

Rays extremely short (1/2 line), erect, yellow. With 17,427 in the mud.

No. 17,443b. Trifolium tridentatum

With 17,431.

No. 17,443c. Siagrinchium bellum

With 17,431.

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* Cont. from p. 176 near top.

"Higher" means the dry land around the muddy floor of the swamp, that is 6 inches or a foot higher on the whole.

– Cont. from bottom p. 171. N. W. Stice of Lakeport, County Horticultural Commissioner, in a letter dated Jan. 2, 1945 says no maps show a Callayomi Valley. The Callayomi School was located on Cobb Mountain road about 5 mi. westerly from Middletown. The valley running west from Middletown may, he suggests, have been called Callayomi Valley.

Today came in to call Prof. J.C. Arthur, one of the most prominent of the old-time botanists in the U.S., one of the well-known few when I was a lad. He walked feebly, hesitatingly, like an old man; and yet his manner was still youthful in spite of his white head and his voice full and strong. We talked of old times; of his winter's visit to San Diego (he is just now returning to his old home at Purdue University); he spoke of his difficulties in early days on account of lack of floras in securing determinations of the host plants of his rusts. We spoke of his old associate on the Gazette, J.M. Coulter.

Then he departed with Prof. Lee Bonar who is showing him around.

— Came in this morning an admirer of my books, H.A. Tibbetts, formerly of the Berkeley City Parks and Los Angeles City Parks, now engaged in pest control research for Standard Oil Company,* — control as to pests of garden plants. He had not much to say but stayed longer than the distinguished Professor Arthur (see above). — Apr. 22, 1936.

I autographed a copy of the Manual for him.

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* Cont from p. 168 at * The main landowner in the Zam-Zem region is Jos. Moore. About Knoxville it is Gambel.

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* No. 17,443d. Euphorbia peplus L. Berkeley, by the side of Orchard Lane in a garden. Apr. 5, 1936.

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* Experimental Gardens, Browns Valley, Yuba Co., Cal.

Cordelia, Solano Co., Apr. 26, 1936

No. 17,444. Ranunculus muricatus L.
Low wet field, lower end of Green Valley, 1 mi. northerly from Cordelia.

No. 17,445. Geranium
With 17,444.

No. 17,446. **Bromus mollis L.**
(det. Beecher Crampton, 7/76)
This grass with 17,444.

No. 17,447. Orthocarpus faucibarbatus Greg.
With 17,444

No. 17,448. **Pleuropogon californicus (Nees) Benth. ex Vasey**
(det. Beecher Crampton, 7/76)
This grass with 17,444.

No. 17,449. **Hordeum brachyantherum Nevski**
(det. B. Crampton, 7/76)
This grass with 17,444.

No. 17,450. **Festuca myuros L.**
This grass with 17,444.

No. 17,451. Ranunculus californicus Benth.
With 17,444.

No. 17,451a. Ranunculus ~~californicus~~ Benth.
With 17,444.

Fairfield (1 mi. nw.), Apr. 26, '36.

No. 17,452. Lasthenia glaberrima DC.
Low wet places, deep hog-wallow. See notes with spm. made from fresh material.

No. 17,453. Lasthenia glaberrima
Very coarse. With no. 17,452.

No. 17,454. **Pleuropogon californicus Benth.**
(det. Beecher Crampton, 7/76)
This grass grew with no. 17,452.

No. 17,455. Eleocharis **macrostachya**
Forming colonies in low places, low spots, 1½ mi. nw. of Fairfield, Solano Co.

No. 17,456. Juncus placocephalus Engelm. var. paniculata Engelm.
With 17,455.

No. 17,457. Scirpus **robustus** Pursh.
With 17,455.

No. 17,458. Psilocarphus brevissimus Nutt.
This inuloid plant grew with no. 17,452.

Berkeley.

This morning came in to call Dr. F. W. Haaris of Monterey. He was with the Coastal Laboratory of the Carnegie Institution for some time, but not the last two years. He is now, having no botanical job, with the Public Works Administration (Federal Relief) as a Supervisor on a project which is designed to make an official guide to the counties of the U.S. He has the same plaint as myself — the inefficiency of "relief" workers. He noted, with a sense of tragedy, that he is losing all touch with botany and botanical work, having no one to talk with at Monterey. He is a Ph.D. from Johns Hopkins, having done his work under Livingston. He is slight in build, rather short (at least a little below average height), and says he is married.

— May 1, 1936.

Pacheco Pass, May 4, 1936.

Santa Clara Co.

Left Berkeley 1 o'clock. Drove to San Jose, stopping to pick up maps at the Cal. Automobile Association office on Grand Ave. in Oakland. Could not determine at San Jose that there was any road across the Mt. Hamilton Range, going by Mt. Hamilton, to the San Joaquin. Therefore came on down to Pacheco Pass. Near the entrance to the pass there are still some very fine clusters of Quercus lobata. Shortly after entering the pass and climbing perhaps two miles, I stop and collect in a gully, facing sw., the following:

No. 17,459. Prunus ilicifolia Walp. Rock pile. Bushes, 6 – 12 ft. tall. In fl.

No. 17,460. Adiantum

Rocky side of gully.

No. 17,461.

This grass grew on the steep bank of the gully in fairly

Pacheco Pass, May 4, 1936 (w. side = Santa Clara Co.; east side = Merced County).

good soil — a fairly shaded spot a part of the day. The gully is openly wooded on brushy.

No. 17,462. Salvia mellifera Greene.

No. 17,463. ~~Sphaeralcea~~ Malacothamnus fasciculatus (Nutt.) Greene. Santa Clara Co.

Corolla pink, small (about 1/2 in. long, but bowl-shaped and so of a little wider diam.). One clump only noticed. 4 ft. h., bushy in habit. In rock pile.

No. 17,464. Solanum umbelliferum Esch. Santa Clara Co. Bush, spreading, on side of gully in good soil.

The clusters of Quercus lobata near the entrance to the pass and also near San Felipe still hold their primitive setting and stir deeply one's admiration of their beauty, subtly and faintly tell of something geologically romantic in their history. But oh! the hills on the east side of the pass in the late afternoon — green yet but with gold saddles on their shoulders and dark strange shadows in their wrinkled hollows. All this be sure anodyne for pain.

Valley W. of Bell's Sta. (Adobe Inn), (2 of Pacheco Pass), May 4, 1936.

No. 17,465. Lavauxia Merced Co.

This grass is fairly common on the dry hills. Often in tufts.

No. 17,466. Eryngium

Erect, branching, 13 to 16 in. high, a marked whorl of pinnately divided leaves at the ground or cleft. Former shallow pool beds.

– Cont. from top of page 170. This heading was formerly set down as Callayomi Valley. For explanation see note on p. 171 ante.

– Cont. from top of page 174 ante. This heading Callayomi Valley, I leave as set down. The locality is, at any rate, near the old Callayomi School. See note on p. 171 ante.

186 Valley floor, alkaline flat, swamp in winter time, 5 mi. e. of Los Banos May 5, 1936 = Dos Palos Slough.

Everything collected at this point seems native save certain spp. noted. The main vegetation mass is primitive.

No. 17,467. Psilocarphus brevissimus Nutt.

This inuloid plant was quite inconspicuous in the salt flat vegetation. Probably frequent.

No. 17,468.

This grass, sometimes common, sometimes infrequent, one finds both dwarfish as this spm., or luxuriant.

No. 17,469. Lythrum hyssopifolia L.

Frequent.

No. 17,470. Veronica peregrina L. var. xalapensis St. John & Warren. Rare.

No. 17,471. Juncus bufonius L. var. congestus Common.

No. 17,472. Eleocharis macrostachya Standing thickly in little colonies here and there.

Dos Palos Slough e. of Los Banos, May 5, '36. Merced Co. 187

No. 17,473.

This grass formed sharply defined colonies, often circular, on the alkali flat - probably spots a bit higher than the general level.

No. 17,474. Juncus

Low spots; not in tufts. Stems scattered or discrete.

No. 17,475. Eleocharis macrostachya

No. 17,476.

An abundant composite.

— Cont. from p. 171 at *. I correct myself again. The first valley coming out of Butts Canon northwards is Locoomi Valley (see ante 58:341). After leaving this little valley through the hills, the next valley is Coyote Valley.

n. of El Nido, near Deadman's Creek*, Merced Co., May 5, 1936 145 ft.

No. 17,477. Centromadia

No. 17,478. Myosurus

Bed of now dry winter surface stream.

No. 17,479. Veronica peregrina L. var. xalapensis St. J. & W. Corolla dull, white, its 4 lobes ovatish, equal, a little more than half as long as the calyx.

No. 17,480. Linanthus liniflorus Greene. var. vallicola Corolla white, fading or drying with a lavender tinge.

No. 17,481. Spergularia

Stems very slender. Cor. small, pink. Surface stream bed. ↑ now dry

No. 17,482. Allocarya acanthocarpa Greene. Prostrate or procumbent borage.

No. 17,483. Plantago

with 17,481.

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*near Deadman's Creek, which is n. of El Nido. Exact station c. 5 mi. n. of El Nido.

No. 17,484. Verbena bracteata Lag. & Rodr. Cor. white. Only one plant as yet in fl. so far as noticed.

No. 17,485. Psilocarphus tenellus Nutt. var. tomis (Eastw.) Crong. This smaller plant is in the bed of the surface stream.

No. 17,486. Gnaphalium ↑ now dry

with 17,481.

No. 17,487. Amsinckia intermedia F. & M.

No. 17,488. Atriplex

Dry alkali.

No. 17,489. Allocarya A. Ciusickii californica Greene. The most abundant species in the broad bed of the now dry surface stream. = A. vallicola Jepson, Ciusickii Greene var.

No. 17,490.

This grass grew with no. 17,489.

No. 17,491. Baeria

No. 17,491a. Lasthenia Infrequent.

No. 17,492. Veronica peregrina L. var. xalapensis St. J. & W. This is more lux-

Deadmon's Creek n. of El Nido, Merced Co. May 5, 1936.

uriant and more abundant than ever seen elsewhere. Here it grows associated with 17,489 in the shallow stream bed (now dry), but often forming pure colonies and all of it very luxuriant as to the individuals. As I recall this in the Sacramento Valley one found an inconspicuous individual here and there, often simple or sparingly branched.

No. 17,493. Spergularia

With 17,489

No. 17,494.

This grass was represented by few individuals in the broad surface stream bed.

Merced (1 mi. N. on road to Bello Vue Ranch), May 6, 1936.

No. 17,495. Potamogeton

Covering surface of canal in places.

No. 17,496. Mimulus

Adobe flat.

No. 17,497.

This grass in dry adobe, but shortly ago very wet.

No. 17,498. Veronica peregrina L. var. xalapensis St. J. & W.

– Cichorium intybus Roadside.

Plantago lanceolata Adobe flat.

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* Cont. from bottom p. 199, ... and all the while a field lark on the hillside flings widely forth at intervals almost as regular as a pendulum's swing the liquid notes of his song on the pulseless air.

Merced, on Snelling road, c. 5 mi. n. of Merced. May 6. 1936.

No. 17,499.

This grass gregarious in low clay spots.

No. 17,500. Trifolium microcephalum Pursh. Dry sandy flat.

No. 17,501. Baeria Dry sandy flat.

No. 17,502. Damasonium californicum Torr. This plant I have collected before; ~~in Solano Co. and in San Joaquin County~~; but never before have I seen it so abundant at this point. In the low places it is gregarious and makes an area of white that was thought to be Limnanthes before the car stopped in order to take a look at it. Fimbriate edge of "petals" turned up all around so that the limb is shallowly cupped or a little saucer-shaped. Filaments of

Merced (on Snelling Road), (s. of Eschscholtzia Sch.) May 6, 36.

stamens subulate, slightly united at base; anthers versatile, pointed at one end, the dehiscing margins bordered with a black line. During anthesis of anthers the styles (stigmatic on the inside at tip) and turned inward and closely approximate by their tip, thus presenting upward a barrier of epidermal surface. After the anthers complete dehiscence the styles diverge and their receptive stigmas are freely exposed. In reality the anthers are sagittate, the attachment to filament being in the notch. Stamens 6; their anthers stand above or over the converged style tips at the beginning. Anther-column with one very long bristle ("unicorn") at tip, curving forward.

Nairn School, on Snelling Road from Merced, Merced Co.
May 6, 1936.

No. 17,503. Elatine
In hog wallow.

No. 17,504. Lilaea subulata
In hog wallow.

No. 17,505. Psilocarphus brevissimus Nutt.
Inuloid plant in wallow.

No. 17,506. Downingia
Lower lip: lobes essentially parallel, not trefoil-shaped, light blue, central field of white with a quadratish greenish-yellow spot at base. At throat, as viewed from above with lens, 4 papillae or cone-shaped peaks; the two in center are really "sugar-loaf" peaks, the two lateral, or margin of lower lip are "made", result from folding of margin of lip. This edge of lower lip at throat is purple or dark blue (But see below) and the central papillae consequently

dark purple. Upper lip: lobes pale blue, lanceolate, curved backward. Calyx-lobes at first ascending, after anthesis rotate. Stylar-column incurved, its bristle reaching as far as the interval between the "peaks" of lower lip at edge of throat. It is only the peaks that are dark purple (see above), not the false peaks or margin of lower lip (corolla).

No. 17,507. Brodiaea coronaria
Typical. Staminodia erect at sides of perianth, minutely 3-toothed at the truncatish apex. Anthers approximate in center, of the same length as staminodia or slightly longer. Really I should say: anthers equaling staminodia or slightly exceeding them.

No. 17,508. Grapphalium
Low wet spot:

No. 17,509. Cyperus

No. 17,510. Ammannia coccinea Ammannia latifolia

No. 17,511. Tillaea

Shallow pool. " "

Low wet spot.

196 Merced River bridge, 1½ mi. n. of Edendale, Merced Co., 6 May, '36

No. 17,512. Lupinus

Sandy ground; stems ascending. Fls. blue

No. 17,513. Astragalus douglasii T. & G. Cor. dull or pale yellowish or perhaps pale greenish-yellow; banner at right angle to tube or slightly tilted backward; wings and keel upturned, equal, a little more than half height of banner. Banner notched. Loam soil. ↑ upturned portion of ventral suture slightly intruded.

No. 17,514. Layia platyglossa ssp-campestris Keck

Rays sulphur-yellow, white tips. Sandy soil.

No. 17,515. Lupinus densiflorus Benth.

Sandy soil. Cor. white.

— Edendale is a mere railway switch in the low rolls of the plain — but with the spring full-blown upon it, one may speak of the glory of Edendale. In two months this tender landscape will be done for, — all changed to dust, heat and dryness.

Dry open grassy hills 1½ mi. ne. of Snelling, Merced Co., 6 May, '36 197

No. 17,516. Calochortus luteus Dougl. dry grassy low hills

No. 17,517. Brodiaea pulchella

Side of gully in two places in the grassy hills. Filaments transversely quadratish (with broad attached base), above abruptly and shortly drawn down to a narrow attachment to anther.

No. 17,518. Sidalcea hirsuta Gray

dry grassy hill, sandy-clay soil.

No. 17,519. Eryngium

Bottom of gully in the grassy hills. The circle of roots on the rootstock moves upward a little each year, at length sloughing off the dead stock below. Does the plant rejuvenate by "deep-seating"? I have seen no evidence of it. And yet moving a little nearer the surface each year it must finally get too high to survive the intense summer heat and so perish (as it were suicidally!).

I stop for luncheon at the crest of a low hill just northeast of Snelling. For miles around the low softly flowing hills are bare. There is not a tree in miles, save out of sight over the crest of the hill backward towards Snelling. Grassy hills with long low rounded crests and great very shallow hollows amongst them. These represent the first uplift of the San Joaquin plain. I survey the landscape eastward towards the High Sierra. Four ranges or kinds of hills are visible: 1. These low rolling hills stretching east some miles 2. The first foothills, brown but dotted all over with the round bodies of the Interior Live Oak, which often stretch in broken longitudinal lines or make patterns

By the interlacing of the lines – they (the oaks) are following the outcropping rock strata. If there are Digger Pines amongst them, the pines cannot be seen from here. I think there are some. 3. Next comes the High Foothill Range, more rugged, broken, peaked – blue in color, to a large extent covered with chaparral. 4. Between the gaps of this range may be seen the main eastern ridges of the Sierra, those lying between its main river systems, covered with snow fields. Framed here some of the outer peaks of the Yosemite group are visible. It is a fine spectacle; – and then my eye returns to the long sweeping grassy hollows in the rolling plain – now of various colors intermingled – brown, green and gold –

* Cont. p. 191 ante.

200 (S.L.) Staff at Kew, July, 1935.

— John I. Gilmour, Assistant Director, Deacanso House near Kew Green.

— Bullock, Botanist in the Herbarium.

— Prior, the head man in the business office at the Herbarium

— E. Nelmes, Librarian. ↑Asst.

— Dr. J. B. Hutchinson, 462 Great West Road, Hounslow.

— Miss Mamma L. Green, 20 Lichfield Road, Kew, Surrey. (her sister = Mrs. White).

17,528!

— Dorningia (see vol. 56, p. 4, no. 17, 273). Lower lip: lobes quadretish, the lateral at right angles to the middle one, all truncatish but apiculate, lavender! with a greenish-yellow center! no angle with throat. Upper lip: lobes ovate, parallel, but backward, but not on a level quite, with plane lower lip. Opening to throat minute or small and filled with stamen-column. Calyx-lobes rotatish but not quite horizontal. Anther-column with a few short mucronate teeth at apex, 2 more prominent than rest. Upper lip darker lavender than lower. — Dry Creek School near Warnerville, Stanislaus Co., 6 May, 1936.

Addresses. — Kew, 1935. 201.

— J. E. H. Roberts, a surgeon, 26 Harley st., London, W. 1., wants Sedum yosemitense.

— Miss M. L. Green, 20 Lichfield Road, Kew.

— Frau Vivi Laurent-Tackholm, Botanical Dept, University of Stockholm (Flora of Egypt).

— Dr. Voehlmer, San Francisco (specializing on lilies).

— Lt Col. C. H. Grey, D.L.O.
Hocker Edge
Cranbrook
Kent

— Dr. Eric Hulten, Botanical Institution, University of Lund, Sweden. Is writing a Flora of Kamtschatka, partly published, of great geographic interest as tracing Asiatic plants into North America. Friend of Frau Tackholm; see above.

— Miss Hilda Jepson, Kennet, Boxgrove ave., Guildford.

— Rev. Lyttleton E. Hubbard, D.D., Saint John's Church, Elizabeth, New Jersey. (passenger on the Georgic).

— Mohamed Hasib, Cairo. Working in the herbarium on Cucurbitaceae.

— H. R. Fletcher, Ph. D., Herbarium of the Royal Botanic Gardens, Edinburgh, Scotland. (At Kew, 1935)

Addresses

- A. Bruce Jackson, 3 The Avenue, Kew.
- Dr. H. R. Fletcher, Royal Botanic Gardens, Edinburgh, Scotland.
- Miss Charlotte Jepson, 165 Stevens Road, Tunbridge Wells, Kent.
- Miss Hilda Jepson, Kennet, Boxgrove av., Guildford, Surrey, England.
- F. J. Chittenden, Royal Horticultural Society, Vincent Square, London S. W.
- Colonel Durham, Manager of the R. H. S., Cumberland Road, Kew.
- Ernest Markham, Gravetye Manor (Clematis).
- H. R. Fletcher, Royal Botanic Gardens.

Pennsylvania R. R. sta., New York.
34th st. and 7th av.
(Otto C. Luehs)

Addresses – Hotels – New York.

- Taft. 7th av. + 50th st.. $2.50 up.
- St. James. 109 - W. 45th st. $1.50 up.
- Prince George, 5th av. at 28th st. $2.00.
- Shelton. Lexington av. and 49th st. $2.50
- Kenmore Hall. 145 - East 23rd st. $1.50 (7.00 - 14.00 per week.)
- Herald Square. 116 - W. 34th. $1.50.

Philadelphia

- Green's, 8th and Chesnut. $1.50
- Lafayette, Broad and Arch. $1.50

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Persons to Look up in California re. native plants or Cal. topography.

Ralph D. Reed, Petroleum Geologist, Los Angeles. ? cf. Who's who. Am. Men. Sci.
– A.B. Bevans, Sinuba (offers to collect).
– Sven Hildor Barton, Barton School, Topanga. (called Aug., 1934).
– Dr. F.W. Briggs, Agronomy, Davis.

Hotels.

Bakersfield. Hotel Rolland ($1.00 up).
Hotel Plaza ($1.00 + free parking space).

Field Memoranda.

— Road from Klamath River over Jack Mt. to Cambria; fine trees; unfrequented.
— cf. Mrs. G. P. Ballard in litt. 8-1-'35.

— Grouse and Horse mountains, Humboldt Co. Cypripedium cal. on headwaters Willow Creek, Arcata Weaverville road. N. Central

Grouse Mt.: Lewisia nevadensis. Brit. Purdy. 6 Violas on this mtn. Erythronium citrinum on Grouse Mtn. — Purdy in litt. 12-11-35. Grouse Mt. an endemic island.

— Northern Sierra Nevada:
Lomatium anatinum — Mohawk Valley.
" plummerae — Sierra Valley; Mountain sta., Plumas Co.

— Cal. Laurel. Glen ranch, w. of Gilroy. Circ. 31' 6" at 5 ft. acc. W. J. Hanna.

— S. H. Barton, Barton School, Tobaa Ga.

— Godetia vaccinia

Travel memoranda

— Am. Acad. Arts & Sciences, 28 Newbury st., Boston.